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ABSTRACT

This publication contains a variety of tables presenting national enrollment, teacher, graduate, and expenditure data for 1965-66 through 1975-76 and projections for 1976-77 through 1985-86. Included are tables of enrollment in elementary and secondary schools and in institutions of higher education, tables of number of high school graduates and of degrees granted by higher education institutions (including degrees by level, sex, and major field of study), tables of faculty in elementary and secondary schools and in institutions of higher education, tables of expenditures for elementary and secondary schools and institutions of higher education, and tables of student charges by institutions of higher education. Each chapter consists mainly of data tables and graphs, preceded by a brief introductory discussion. Appendix A includes detailed technical explanations of projection methods for the respective chapters, detailed estimation methods, classification methods, and a glossary of terms. Appendix B contains tables of population projections, alternative enrollment projections, and other tables of data used in making projections. (Author/JG)

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PROJECTIONS

OF

EDUCATION

STATISTICS

TO

1985-86

HIGHLIGHTS

If present trends continue, changes can be expected in—

☐ Enrollment in all regular public and private elementary and secondary day schools:
  - From 50.1 million in 1975 to 46.1 million in 1985.

☐ Enrollment in institutions of higher education:
  - From 11.2 million in 1975 to 13.4 million in 1985.

☐ High school graduates from all public and private secondary day schools:
  - From 3.1 million in 1975-76 to 2.7 million in 1985-86.

☐ Bachelor's degrees granted by institutions of higher education:
  - From 909,000 in 1975-76 to 953,000 in 1985-86.

☐ Full-time-equivalent teachers in all regular public and private elementary and secondary schools:
  - From 2,463,000 in 1975 to 2,484,000 in 1985.

☐ Full-time-equivalent instructional staff for resident courses in institutions of higher education:
  - From 515,000 in 1975 to 532,000 in 1985.

☐ Total expenditures of all regular public and private elementary and secondary schools:
  - From $75.0 billion in 1975-76 to $101.4 billion in 1985-86 (in 1975-76 dollars).

☐ Total expenditures of institutions of higher education:
  - From $44.8 billion in 1975-76 to $59.6 billion in 1985-86 (in 1975-76 dollars).

NCES 77-402

PROJECTIONS

EDUCATION STATISTICS TO 1985-86

BY
Martin M. Frankel and Forrest W. Harrison
National Center for Education Statistics

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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FOREWORD

This publication provides projections of statistics for elementary and secondary schools and institutions of higher education. The statistics include enrollments, graduates, teachers, and expenditures. These projections, which supersede those shown in *Projections of Education Statistics to 1984-85*, 1975 edition, are based mainly on 1965-66 to 1975-76 National Center for Education Statistics data and cover the period of 1976-77 to 1985-86 for the United States. Table 1 is a summary of these projections and is available separately in a pocket-sized folder as *Statistics of Trends in Education, 1965-66 to 1985-86*, 1976 edition. Many of these data are available by State for 1975-76 in the National Center for Education Statistics publication *Digest of Education Statistics*, 1976 edition.

The projections shown here assume, primarily, that the past 11 years' trends in enrollment rates, retention rates, class sizes, and per-pupil expenditures will continue through 1985-86. Further information about projected changes and the assumptions on which these are based are shown in the main body of this report. Details of the methodology supporting these projections are in the appendixes.

Vance W. Grant, Acting Chief
Statistical Information Branch

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Division of Statistical Services

SPECIAL NOTE

In November 1976, the National Center for Education Statistics selected a sample of survey responses from institutions of higher education and generated fall 1976 estimated national enrollment totals. The estimate for total degree-credit and non-degree-credit enrollment is 11.2 million, a 0.4-percent increase over the 1975 enrollment. The 11.2 million estimate for 1976 was not available in time to be included in this publication. The projection in table 5 of this publication for fall 1976 total degree-credit and non-degree-credit enrollment is 11.7 million.

The estimate for 1976 indicates that the 1975-to-1976 enrollment increase, if indeed there is an increase, is the smallest annual increase in over 20 years. The increase from 1974 to 1975 was 9.4 percent, the largest annual increase in over 20 years. Therefore, the high and low extremes in enrollment increases over the past 20-year period have occurred in the past 2 years.

At the present time, it is uncertain what portent the past 2 years of unexpected enrollment figures will hold for future enrollments in institutions of higher education. However, the large disparity in enrollment increases over the past 2 years emphasizes the necessity to consider the higher education enrollment projections in the main body of this publication and the alternative enrollment projections in the appendix as a range of possible future values of the statistics being projected. No false sense of precision should be attributed to the numerical values of the projections.

Realizing that projections publications become outdated more rapidly than many other statistical publications, we are now studying methods of revising our publication procedures in order to make projections available on a more timely basis each year.

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CHAPTER I
Introduction and Summary

Guide to the Publication

This is the thirteenth in a series of annual projections of data on education, revised each year in order to take account of current information and emerging trends.

The publication contains a variety of tables presenting enrollment, teacher, graduate, and expenditure data for the past 11 years and projections for the next 10 years; chapter II, tables of enrollment in elementary and secondary schools and in institutions of higher education; chapter III, tables of number of high school graduates and of degrees granted by higher education institutions (degrees by level and sex and by major fields of study are included); chapter IV, tables of classroom teachers in elementary and secondary schools and of faculty in institutions of higher education; chapter V, tables of expenditures for elementary and secondary schools and for institutions of higher education; chapter VI, tables of student charges by institutions of higher education. Footnotes to the tables provide (1) assumptions underlying the projections, (2) published sources of the data (usually National Center for Education Statistics surveys), and (3) references to tables and other data in the appendixes. In each chapter, the tables are preceded by detailed explanations of inclusions, exclusions, and descriptions of data and projection methods.

Appendix tables A1 through A5 give detailed technical explanations of projection methods for their respective chapters in the main body of the publication. Appendix A also includes detailed estimation methods, classification changes, and a glossary of terms. Appendix B contains tables of population projections, alternative enrollment projections, and other tables of data used in making projections.

The statistical universe from which the enrollment and other educational data were drawn consists of (1) the public school districts which report to their respective State departments of education, (2) the nonpublic grade schools included in the *Nonpublic School Directory* of the National Center for Education Statistics,[1] and (3) the institutions of higher education meeting the requirements for inclusion in the *Higher Education Directory* of the National Center for Education Statistics.[2] The coverage is for the 50 States and the District of Columbia and excludes extension centers of U.S. educational institutions abroad.

This is the second edition that includes projections of elementary and secondary enrollment based on the series II population projection of the Bureau of the Census. The series II population projection, which assumes that the ultimate completed cohort fertility will be 2.1 births per woman, was selected because this assumption most closely agrees with the most recent fertility and expected fertility data. The series II projection is of interest, also, because at 2.1 births per woman and without migration the population would replace itself after enough time had elapsed for the age structure to stabilize.

The interaction of enrollment rates and population age groups determines, directly or indirectly, the projections in the different areas of education. The projections are shown graphically for the principal areas of education in figures 1 through 9 and, in more detail, with percentage increases from 1965 to 1975 and from 1975 to 1985, in table 1.

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[1] U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Nonpublic School Directory, Elementary and Secondary Day Schools, 1968-69* (Washington, D.C.: U.S. Government Printing Office, 1970).

[2] U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Education Directory, 1975-76, Higher Education* (Washington, D.C.: U.S. Government Printing Office, 1976).

Summary of Methodology

Projections of enrollments in regular elementary and secondary schools are based primarily on grade-retention rates. Projections of kindergarten and 1st-grade students entering elementary school are based on projections of the 5- and 6-year-old populations from the U.S. Bureau of the Census.

Projections of pupil-teacher ratios are applied to projections of enrollment to obtain projections of classroom teachers. Projections of current expenditure per pupil are applied to projections of enrollments to obtain projections of current expenditure. Projections of high school graduates are based on projections of the average 18-year-old population.

Projections of enrollments in institutions of higher education are based primarily on Bureau of the Census projections of the 18-21-year-old population. These projections take into account enrollment trends by type and control of institutions, level of institution, and sex and attendance status of students.

Projections of full-time-equivalent student-staff ratios are applied to projections of full-time-equivalent enrollment to obtain projections of instructional staff. Projections of expenditures for "student education" per full-time-equivalent student are applied to projections of full-time-equivalent enrollment to obtain projections of current expenditures. Projections of bachelor's degrees are based on actual data and projections of first-time degree-credit enrollment 4 years earlier. Projections of doctor's degrees are based on actual data and projections of the average of first-year enrollments for advanced degrees 7 and 8 years earlier.

Caveats

The properties of the methodology and assumptions, which determine projections, and the nature of the statistical universes from which the basic data are obtained require that no false sense of accuracy be attributed to the numerical values of the projections.

The projections are descriptive in that no particular theories are presented to explain the observed trends. In addition to being largely free of theory, the projections are without value judgments and without advocacy of any policy changes.

It should be noted that figures for the next 10 years are referred to as projections and not as forecasts or predictions. The approach followed is to apply mathematically the most recent trends to demographic data and to extrapolate the trends into the future. Where trends are changing, assumptions deemed most reasonable are made. There is, of course, no universal agreement on what are the most reasonable assumptions, and, therefore, the methods and data used to make these projections are shown in detail so that readers who wish to make other assumptions will be able to derive their own projections. Alternative enrollment projections are shown in the appendix (tables B-3, B-4, B-5, and B-6). These alternatives provide a range of possible future values. Projections of pupil-teacher ratios, current expenditures per pupil, student-staff ratios, etc., are applied to the enrollment projections in the main body of this publication. However, these projected rates could also have been applied to the alternative enrollment projections in the appendix to obtain a range of projections. Alternative assumptions for these rates could have been applied also to the alternative enrollment projections resulting in an even broader range of projections.

The accuracy and reliability of the basic data, and the consistency of the statistical universes from which the basic data are obtained, are not the same for all statistics. In addition, some of the statistics are inherently subject to more variability than are other statistics. An attempt has been made in the first few paragraphs in the text of each chapter to point out these differences. It is hoped that these additional caveats in each chapter will be helpful to the reader in examining the projections.

Table 1.–Summary of Trends in Education: United States, 1965-66 to 1985-86

Characteristic	Fall 1965	Fall 1975	Percent change, 1965 to 1975	Fall 1985[1] (projected)	Percent change, 1975 to 1985
	Thousands			**Thousands**	
School-age population					
5-13	35,877	33,300	–7	[2] 30,508	–8
14-17	14,201	16,902	19	[2] 14,358	–15
18-21	12,371	16,545	34	[2] 15,286	–8
18 (nearest birthday)	3,608	4,223	17	[2] 3,538	–16
Public school districts	27.0	16.4	–39	...	...
Operating	24.4	16.0	–34	...	...
Nonoperating	2.5	.4	–84	...	...
Enrollment:					
K-grade 12	48,473	50,137	3	46,058	–8
K-8	35,463	34,456	–3	32,730	–5
9-12	13,010	15,681	21	13,328	–15
Public	42,173	44,837	6	40,758	–9
K-8	30,563	30,556	0	28,830	–6
9-12	11,610	14,281	23	11,928	–16
Nonpublic	6,300	5,300	–16	5,300	0
Higher Education:					
Total	5,921	11,185	89	13,360	19
Public	3,970	8,835	123	11,070	25
Private	1,951	2,350	20	2,290	–3
4-year	4,748	7,314	70	7,623	4
2-year	1,173	3,871	230	5,737	48
Men	3,630	6,149	69	6,865	12
Women	2,291	5,036	120	6,495	29
Full-time	4,082	6,841	68	7,243	6
Part-time	1,838	4,344	136	6,117	41
Full-time-equivalent	4,671	8,481	82	9,546	13
Degree-credit	5,526	9,731	76	11,000	13
Public	3,624	7,426	105	8,756	18
Private	1,902	2,306	21	2,244	–3
Undergraduate	4,829	8,468	97	9,544	13
First-time	1,442	1,910	32	1,709	–11
Graduate	697	1,263	81	1,456	15
Non-degree-credit	395	1,453	268	2,360	62
Public	345	1,409	308	2,314	64
Private	49	45	–8	46	2
	1965-66	**1975-76**		**1985-86**	
High school graduates	2,632	3,135	19	2,681	–14
Public	2,334	2,825	21	2,371	–16
Nonpublic	298	310	4	310	0
Boys	1,308	1,543	18	1,321	–14
Girls	1,325	1,592	20	1,360	–15
	Percent			**Percent**	
Percent that high school graduates are of the 18-year-old-population	74.9	74.3	...	75.7	...
Percent that first-time degree-credit enrollment is of high school graduates	54.1	60.8	...	63.8	...

See footnotes at end of table.

Table 1.--Summary of Trends in Education: United States, 1965-66 to 1985-86—Continued

Characteristic	Fall 1965	Fall 1975	Percent change, 1965 to 1975	Fall 1985[1] (projected)	Percent change, 1975 to 1985
	Thousands			Thousands	
Earned degrees:					
Bachelor's	520	909	75	953	5
Men	299	484	62	480	−1
Women	221	425	92	473	11
First-professional	31	59	90	72	22
Men	30	49	63	52	6
Women	1	9	800	20	122
Master's	141	316	124	405	28
Men	93	173	86	207	20
Women	47	143	204	198	38
Doctor's	18	35	94	42	20
Men	16	27	69	28	4
Women	2	8	300	14	75
	Fall 1965	**Fall 1975**		**Fall 1985**	
Instructional staff:					
Elementary and secondary					
Classroom teachers	1,933	2,463	27	2,484	1
Elementary	1,112	1,354	22	1,498	11
Secondary	822	1,109	35	986	−11
Public	1,710	2,202	29	2,188	−1
Elementary	965	1,183	23	1,299	10
Secondary	746	1,019	37	889	−13
Nonpublic	223	261	17	296	13
Other instructional staff (public)	175	258	47	254	−2
Higher education					
Resident courses	412	670	63	696	4
Full time-equivalent	316	515	63	532	3
	Current unadjusted dollars				Constant 1975-76 dollars
	1965-66		1975-76		1985-86
Total expenditures by regular education institutions:[3]			Billions of dollars		
All levels	$44.9		$119.8		$161.0
Public	35.1		97.5		131.5
Nonpublic	9.8		22.3		29.5
Elementary and secondary schools	29.7		75.0		101.4
Public	26.3		67.1		89.3
Nonpublic	3.4		7.9		12.1
Institutions of higher education	15.2		44.8		59.6
Public	8.8		30.4		42.2
Nonpublic	6.4		14.4		17.4
Current expenditure per pupil in average daily attendance in public elementary-secondary schools			Dollars		
	$537		$1,388		$2,130

Table 1.--Summary of Trends in Education: United States 1965-66 to 1985-86—Continued

Characteristic	Fall 1965	Fall 1975	Percent change, 1965 to 1975	Fall 1985[1] (projected)	Percent change, 1975 to 1985

	Current unadjusted dollars		Constant 1975-76 dollars
	1965-66	1975-76	1985-86
	Billions of Dollars		
Estimated average charges per full-time undergraduate degree-credit student:			
Tuition and required fees:			
Public	257	513	612
Private	1,154	2,333	2,840
Board:			
Public	445	681	674
Private	495	724	712
Dormitory room:			
Public	281	554	689
Private	356	610	624

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[1] Projections are based on assumptions given in appendix A of *Projections of Educational Statistics to 1985-86.* Users should check the acceptability of these assumptions for their purposes.

[2] Population projections are based on Series 2 from the Bureau of the Census.

[3] Includes current expenditures, interest, and capital outlay.

NOTE.—Data are for the 50 States and the District of Columbia. Because of rounding, details may not add to totals.

CHAPTER II

Enrollment

Martin M. Frankel and Loraine C. Simpson

Projections of enrollment in regular elementary and secondary schools

Projections of enrollments in regular public elementary and secondary schools are computed by using a method referred to as the cohort-survival method. This method depends primarily upon assumptions about the entrance of 1st-graders into elementary and secondary schools and the proportion that the enrollment in a particular grade g in year t is of the enrollment in the preceding grade g-1 in the preceding year t-1. We realize that this is not a true cohort-survival method since some of the students in grade g in year t were not in grade g-1 in year t-1.

The advantage of this method is that projections are based primarily on students already enrolled, especially for the beginning of the projection period. For projections 1 year into the future, 11 of the 12 grades are based on actual enrollments 1 year earlier; for projections 2 years into the future, 10 of the 12 grades are based on actual enrollments 2 years earlier, and so on. The projections not based on actual past enrollments are based on projections of the 6-year-old population. Six-year-olds entering 1st grade through fall 1980 were already born when the latest population projections were made; thus, the number is not dependent on assumed fertifility rates. By 1985, the last year shown in the tables, only projections of kindergarten through grade 5 depend on assumed fertility rates.

This method has been used since 1966 with great success. The average discrepancy between actual enrollments and projections 1 year out is 0.2 percent with a maximum of 0.6 percent. The average and maximum for 2 years out are 0.4 and 0.7, respectively, and for 5 years out the figures are 1.1 percent and 1.9 percent. The projection made in 1966 for 1975 was just 3.7 percent too high.

Projections of enrollments in regular nonpublic elementary and secondary schools are based on the assumption that the 1975 estimated enrollment will remain constant through 1985. The 1975 estimates are based on independent data from the National Catholic Education Association, Market Data Retrieval, Inc., and Curriculum Information Center, Inc.

Projections of enrollments in institutions of higher education

Projections of enrollments in institutions of higher education have not been nearly as accurate as projections of enrollments in elementary and secondary schools.

Unlike elementary and secondary schools, where attendance is mandatory for most students, enrollment in institutions of higher education is subject to much more variability. These enrollments are affected by economic conditions, political and administrative decisions, the status value of a degree, the intrinsic value of higher education, the cost of an education, etc. Some of these factors are impossible to quantify; most of them defy anticipation.

In addition, over the past 10 or 12 years, the higher education enrollment universe has undergone some major changes. The students' calls for relevancy of curriculums during the late 1960's, together with the growth of community colleges and the anticipation by the higher education community of a significant drop in the 1980's of the traditional college-age population, led to a transition from a higher education universe toward a postsecondary universe. The distinction between a degree-credit and non-degree-credit student has become so unclear, that, beginning in fall 1976, the National Center for Education Statistics will no longer attempt to collect separate data for these two categories.

Therefore, the projections of enrollments in institutions of higher education should be regarded only as indicators of broad trends, and no false sense of precision should be attributed to any specific numerical values. The projections in this chapter, which are consistent with the projections (faculty, degrees, and expenditures) in chapters III, IV, and V, should be looked at in conjunction with the alternative projections shown in appendix tables B-5 and B-6 and illustrated in figure 2.

All Levels (table 2)

Total fall enrollment (elementary, secondary, and higher education) increased from 54 million in 1965 to 61 million in 1975 and is expected to decrease to 59 million in 1985. These totals include daytime enrollment in all regular public and nonpublic (parochial and nonsectarian) elementary and secondary schools; degree-credit enrollment in publicly and privately controlled institutions of higher education in programs leading to a bachelor's or higher degree; and non-degree-credit enrollment in programs that extend not more than 3 years beyond high school and are designed to prepare for a technical, semiprofessional, or craftsman-clerical position.

Excluded from the enrollments in institutions of higher education are adult education courses of regular length; short courses of any kind; and correspondence, television, or radio courses, some of which are degree-credit courses. Excluded from the enrollments in elementary and secondary schools are: (1) Those in public and nonpublic subcollegiate, vocational, technical, and trade schools, unless they are a part of the regular school system; (2) enrollments in evening classes in regular public schools; and (3) enrollments in elementary and secondary grades in public and nonpublic residential schools for exceptional children, Federal schools for Indians, federally operated schools on Federal installations, and subcollegiate departments of public and nonpublic institutions of higher education. The elementary and secondary school enrollments also exclude children aged 3 to 6 years enrolled in independent public and nonpublic nursery schools and kindergartens (exclusively preprimary schools). However, estimates of the latter enrollment are shown in table 2 as a separate item.

The projections of fall enrollments shown in table 2 are based primarily on the following assumptions: (1) The percentages of school-age persons enrolling in schools will continue the 1965 to 1975 trends; (2) the retention rates in public elementary and secondary schools will remain constant at the average of the 1971 to 1975 levels; and (3) the series II school-age population on which the projections are based will remain through 1985 substantially as now estimated and projected by the Bureau of the Census. These population bases are shown in appendix B, tables B-1 and B-2.

Elementary and Secondary Day Schools (tables 3, 4)

Fall enrollment in regular elementary and secondary day schools increased from 48.5 million in 1964 to 51.3 million in 1970. In 1975, this enrollment was 50.1 million, 1.2 million fewer students than in 1970, and by 1985 is expected to decrease to 46.1 million, 2.4 million fewer than in 1965. The 1975 figure excludes an estimated 310,000 enrolled in public and nonpublic schools such as residential schools for exceptional children, subcollegiate departments of public and nonpublic institutions of higher education, Federal schools for Indians, and federally operated schools on Federal installations. It also excludes an estimated 2.0 million between the ages of 3 and 6 years enrolled in independent nursery schools and kindergartens and an estimated 1.2 million in "special" (mostly private business and trade) schools.[1]

Enrollment in grades K-8 increased from 35.5 million in 1965 to a high of 36.8 million in 1969 and decreased to 34.4 million in 1975. It is expected to continue to decrease to 31.7 million in 1981 and then begin to increase, reaching 32.7 million by 1985. The projected decrease of 5 million elementary students between 1969 and 1981 is based on the assumption that the series II school-age population on which the projections are based will remain through 1985 substantially as now projected by the Census Bureau.

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[1] U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Population Characteristics, Social and Economic Characteristics of Students: October 1974," Series P-20, No. 272, November 1974.

The series II population projection is based on an ultimate completed cohort fertility rate of 2.1 births per woman, which represents replacement level. Replacement-level fertility is that required for a population to replace itself indefinitely, given projected mortality rates and in the absence of net migration. The 2.1 births per woman is also compatible with the most recent birth expectation data.[2]

Enrollment in grades 9-12, which increased from 13.0 million in 1965 to 15.7 million in 1975, is expected to remain at about the same level through 1978 and then begin to decrease rapidly to 13.3 million in 1985 as the children, born in the low birth years of the late 1960's, progress through high school.

Enrollment in schools organized as secondary (see appendix A, "Glossary," for definition of elementary and secondary schools) increased from 16.9 million in 1965 to 20.5 million in 1975 and is expected to decrease to 17.0 million in 1985. The enrollment in secondary schools is larger than that in grades 9 through 12 (as shown in tables 3 and 4) because it includes all of the grades 9 through 12 enrollment as well as the enrollment in grades 7 and 8 in junior high schools. It may be even higher than it appears to be in table 4, because some State departments of education report only by grade even though some of their schools are organized on an elementary and secondary basis. In recent years, an increasing number of States have reported in this manner, and, therefore, the elementary-secondary breakdown should be used with some reservations.

The reported enrollment in elementary schools is smaller than that in kindergarten through grade 8 (tables 3 and 4) because it excludes enrollment in grades 7 and 8 in junior high schools. Enrollment in elementary schools reached a peak of 32.0 million in 1967 but had dropped to 29.6 million in 1975 and is expected to continue to decrease to 27.8 million in 1980 and 1981 and then begin to increase, reaching 29.1 million by 1985.

Public school enrollment (tables 3, 4)

Projections of enrollment in regular day schools are shown in table 3 by grade group and in table 4 by organizational level.

The public school enrollment by grade was projected for each grade separately and then summed to obtain the projections by grade group. The projections by grade were derived (1) by applying projected age-specific enrollment rates to 6-year-olds (Bureau of the Census population series II) and (2) by applying projected grade-retention rates to children in grades 1 through 11. For an explanation of the fertility rates used by the Bureau of the Census for projecting series II population, see appendix B, table B-1 footnotes.

The enrollment in regular public day schools by organization level was derived by assuming that the percentages of the 7th- and 8th-grade enrollment organized as secondary school enrollment will remain constant at the average of the 1973 to 1975 levels.

For a more detailed description of the assumptions and methods used in projecting public school enrollment, see footnotes to tables 3 and 4 and appendix A, table A-1.

Nonpublic school enrollment (tables 3, 4)

More than 10 percent of regular day school enrollment (K-12) are now in nonpublic schools, about 65 percent in Catholic schools. The projections by grade included in table 3 are based on the limited information available to the National Center for Education Statistics at this time. Therefore, making projections by conventional methods is not feasible. It is assumed that enrollment in regular nonpublic elementary and secondary schools will remain constant through 1985.

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[2] U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Population Characteristics, Fertility Expectations of American Women: June 1974," Series P-20, No. 277, February 1975.

Institutions of Higher Education (tables 5, 6, 7, 8)

Fall enrollment in both 4-year and 2-year institutions of higher education includes resident and extension, day and evening, full-time and part-time students who (1) are taking work creditable toward a bachelor's or higher degree or (2) are in occupational or general studies programs not chiefly creditable toward a bachelor's degree but preparing for a technical, semiprofessional, or craftsman-clerical position. The total enrollment increased from 5.9 million in 1965 to 11.2 million in 1975 and is expected to be 13.4 million in 1985.

Women, who accounted for 39 percent of total enrollment in 1965, accounted for 45 percent in 1975 and their percentage is expected to increase to 49 percent in 1985.

The percentage of part-time enrollment remained at about 32 percent through 1971 and then began increasing, reaching 39 percent in 1975. This percentage is expected to be 46 percent in 1985.

Enrollment in public institutions has grown rapidly over the past 10 years, while enrollments in private institutions have shown only modest gains. In 1965, public institutions accounted for 67 percent of all enrollments. By 1975, this percentage increased to 79 percent and by 1985 it is expected to reach 83 percent.

Two-year institutions, which enrolled 20 percent of all students in 1965, enrolled nearly 35 percent in 1975. By 1985, 43 percent of all students are expected to be enrolled in 2-year institutions.

Full-time-equivalent enrollment (table 9)

Estimated full-time-equivalent opening fall enrollment in degree-credit and non-degree-credit courses increased from 4.7 million in 1965 to 8.5 million in 1975 and is expected to be 9.5 million in 1985. The full-time-equivalent enrollment in degree-credit courses is projected to increase by nearly 900,000 through 1982 and then drop by 400,000 from 1982 to 1985.

In non-degree-credit courses, part-time enrollment has always comprised more than 50 percent of total enrollment. This relationship is expected to continue through 1985. The full-time-equivalent enrollment in non-degree-credit courses is expected to increase from 986,000 in 1975 to 1,586,000 in 1985.

The projections of full-time-equivalent enrollment are based on the assumption that the 1975 full-time equivalent of part-time enrollment, by type and control of institution and by degree-credit status, will remain constant through 1985.

Reflecting the decreasing percentage that full-time students make up of degree-credit enrollment, the divergence between full-time-equivalent degree-credit enrollment and degree-credit enrollment is becoming greater. The percentage that full-time-equivalent degree-credit enrollment is of degree-credit enrollment decreased from over 80 percent in 1965 to 77 percent in 1975 and is expected to drop to nearly 73 percent in 1985, when decreases in the traditional college-age population (18-21-years old) will tend to reduce the full-time enrollment base.

First-time degree-credit enrollment (tables 11, 12, 13)

First-time degree-credit enrollment, which increased from 1,225,000 students in 1965 to 1,910,000 in 1975, is expected to increase to 1,955,000 in 1978, then decrease to 1,709,000 in 1985.

The percentage of first-time degree-credit enrollment that is full-time decreased from 83 percent in 1965 to 76 percent in 1975 and is expected to decrease slightly to 75 percent in 1985.

The projection of first-time degree-credit enrollment is based primarily on the assumption that full-time first-time enrollment, expessed as a percentage of the population averaging 18 years of age, will follow the 1965 to 1975 trend through 1985.

Graduate enrollment (table 14)

The graduate enrollments and projections in this edition differ from graduate figures in 1973 and previous editions because they include extension graduate enrollment, which previously was included in undergraduate and first-professional degree-credit enrollment figures.

Graduate enrollment increased from 697,000 in 1965 to 1,263,000 in 1975 and is expected to increase to 1,500,000 in 1982 before decreasing to 1,456,000 in 1985.

Alternative projections of degree-credit, non-degree-credit, and first-time degree-credit enrollment in institutions of higher education (tables B-5 and B-6)

Alternative enrollment projections for institutions of higher education are shown in appendix B. These projections are primarily based on alternative full-time enrollment rates. For a detailed description of the assumptions and methods used in making these projections, see appendix table A-1 and footnotes to appendix tables B-5 and B-6.

For 1985, alternative projections shown in appendix B indicate that enrollments might be as much as 10 percent higher than the projections in this chapter show. However, at the present time, the lower alternative projection appears to be a more reasonable alternative. This low alternative enrollment projection increases from 11.2 million students in 1975 to 12.1 million in 1981 and then drops back down to 11.2 million in 1985, 16 percent lower than the 13.4 million students in 1985 shown in the tables in this chapter.

For first-time degree-credit enrollment, the high alternative projection shows a slight increase over the 1.9 million students enrolled in 1975 to 2.0 million around 1980 and then a decrease back to 1.9 million in 1985. This compares with a 1985 projection of 1.7 million in this chapter and a low alternative of 1.6 million in 1985.

Figure 1.--Enrollment in grades K-12 of regular day schools, with alternatives: United States, fall 1965 to 1985

(Data from tables 3, B-3, B-4)

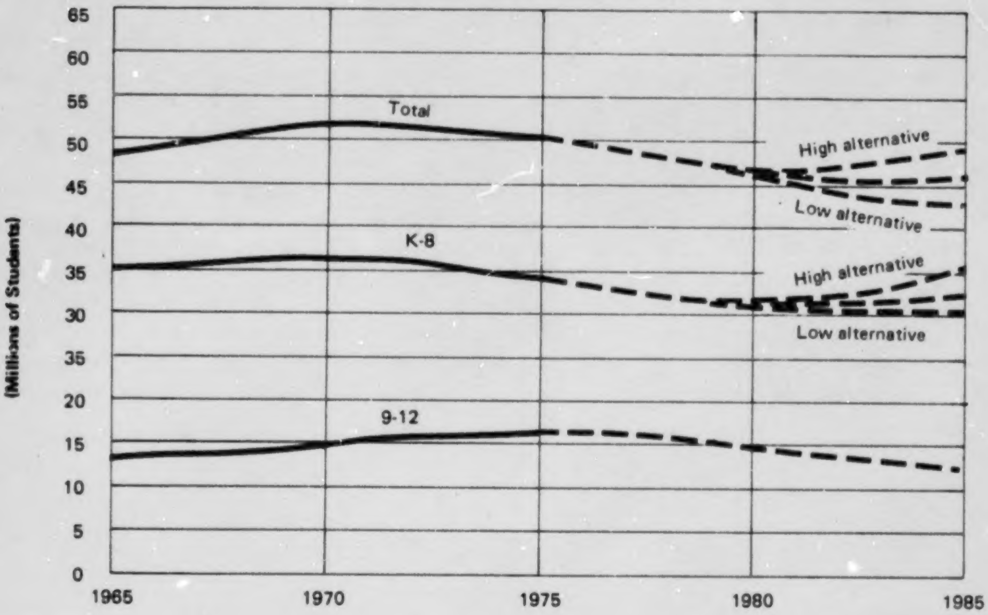

Figure 2.--Total enrollment in institutions of higher education, with alternatives: United States, fall 1965 to 1985

(Data from tables 5 and B-5)

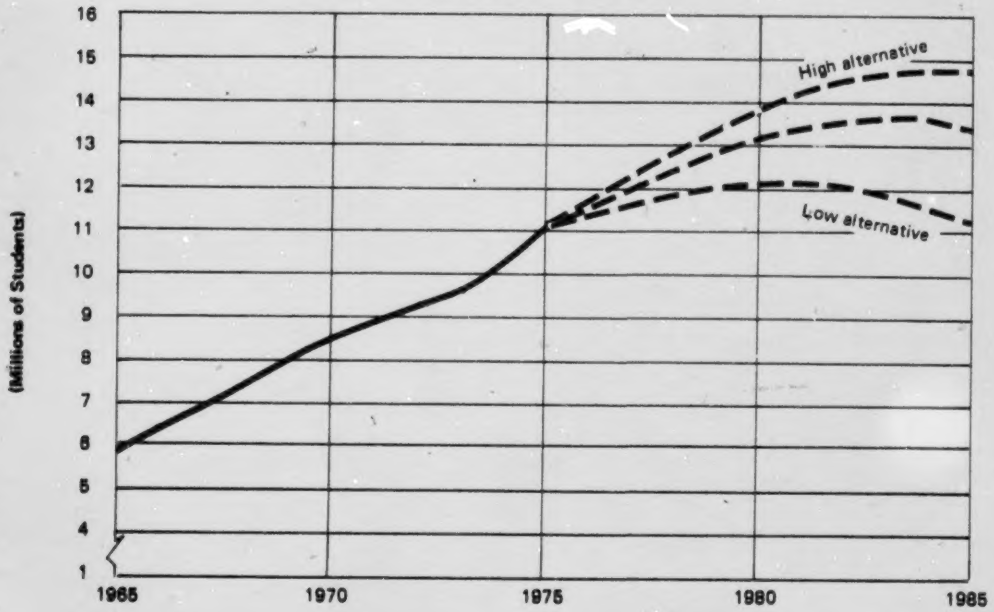

Table 2.–Summary of enrollment in educational institutions, by institutional level and control: United States, fall 1965 to 1985

[In thousands]

Year (fall)	Total enrollment (excluding independent nursery schools and kindergartens)			Institutions of higher education[1]		Regular elementary and secondary day schools[2]				Estimated independent nursery schools and kindergartens[3]	
						Grades K-8		Grades 9-12			
	Total	Public	Non-public	Public	Non-public	Public	Non-public	Public	Non-public	Public	Non-public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1965 . .	54,394	46,143	8,251	3,970	1,951	30,563	4,900	11,610	1,400	305	799
1966 . .	55,629	47,388	8,241	4,349	2,041	31,145	4,800	11,894	1,400	374	858
1967 . .	56,803	48,707	8,096	4,816	2,096	31,641	4,600	12,250	1,400	467	911
1968 . .	58,257	50,375	7,882	5,431	2,082	32,226	4,400	12,718	1,400	437	927
1969 . .	59,124	51,516	7,608	5,897	2,108	32,597	4,200	13,022	1,300	326	1,028
1970 . .	59,890	52,337	7,553	6,428	2,153	32,577	4,100	13,332	1,300	421	1,113
1971 . .	60,329	52,885	7,444	6,804	2,144	32,265	4,000	13,816	1,300	524	1,138
1972 . .	60,259	52,814	7,445	7,070	2,145	31,831	4,000	13,913	1,300	549	1,196
1973 . .	60,433	52,850	7,583	7,420	2,183	31,353	4,000	14,077	1,400	343	1,232
1974 . .	60,576	53,041	7,535	7,988	2,235	30,921	3,900	14,132	1,400	364	1,525
1975 . .	61,324	53,674	7,650	8,835	2,350	30,545	3,900	14,294	1,400	489	1,531
						Projected[4]					
1976 . .	61,386	53,691	7,695	9,298	2,395	30,072	3,900	14,321	1,400	493	1,528
1977 . .	61,167	53,437	7,730	9,716	2,430	29,463	3,900	14,258	1,400	473	1,530
1978 . .	60,726	52,972	7,754	10,118	2,454	28,753	3,900	14,101	1,400	464	1,594
1979 . .	60,152	52,388	7,764	10,464	2,464	28,199	3,900	13,725	1,400	474	1,714
1980 . .	59,623	51,856	7,767	10,747	2,467	27,876	3,900	13,233	1,400	497	1,869
1981 . .	59,295	51,530	7,765	11,012	2,465	27,819	3,900	12,699	1,400	526	2,043
1982 . .	59,042	51,296	7,746	11,183	2,446	27,923	3,900	12,190	1,400	559	2,229
1983 . .	59,013	51,302	7,711	11232	2,411	28,158	3,900	11,912	1,400	593	2,421
1984 . .	59,148	51,499	7,649	11,175	2,349	28,446	3,900	11,878	1,400	626	2,609
1985 . .	59,418	51,828	7,590	11,070	2,290	28,830	3,900	11,928	1,400	657	2,779

[1] Includes degree-credit and non-degree-credit enrollment.

[2] Does not include independent nursery schools and kindergartens, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, and federally operated schools on Federal installations.

[3] Estimates of independent nursery school and kindergarten enrollments are based on the differences between all nursery school and kindergarten enrollments of children aged 3, 4, 5, and 6 years, as reported by the Bureau of the Census, and nursery school and kindergarten enrollments reported by the regular public and private schools.

[4] For assumptions on which projections of elementary, secondary, and higher education enrollments are based and for projection methods used, see footnotes to tables 3, 6, and 9, and methodology in appendix A, table A-1.

The projections of enrollments in independent nursery schools and kindergartens are based on the following assumptions: (a) Enrollments in all nursery schools and kindergartens of children aged 3, 4, 5, and 6 years will follow the 1965-75 trends of enrollment in these schools at each age level as a percentage of the total population of that age. (b) Enrollments in independent nursery schools and kindergartens of children aged 3, 4, 5, and 6 years will be the difference between enrollment in all nursery schools and kindergartens, as reported by the Bureau of the Census, and enrollment in nursery schools and kindergartens reported by regular public and private schools.

For further methodological details, see appendix A, table A-1.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Nursery school and kindergarten enrollment data are based on (1) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Nursery-Kindergarten Enrollment of Children under Six,* October 1964 through 1966, (b) *Preprimary Enrollment of Children under Six,* October 1967 and 1968, (c) *Preprimary Enrollment,* October 1969 through 1972, 1974, and 1975; and 2) U.S. Department of Commerce, Bureau of the Census, *Current Population Reports,* "Population Characteristics, Nursery School and Kindergarten Enrollment: October 1973," Series P-20, No. 268, August 1974.

Table 3.–Enrollment in grades K-8 and 9-12 of regular day schools, by institutional control: United States, fall 1965 to 1985[1]

[In thousands]

Year (fall) (1)	Total public and nonpublic K-12 (2)	Total public and nonpublic K-8 (3)	Total public and nonpublic 9-12 (4)	Public K-12 (5)	Public K-8 (6)	Public 9-12 (7)	Nonpublic (estimated)[2] K-12 (8)	Nonpublic (estimated)[2] K-8 (9)	Nonpublic (estimated)[2] 9-12[3] (10)
1965	48,473	35,463	13,010	42,173	30,563	11,610	6,300	[4] 4,900	[4] 1,400
1966	49,239	35,945	13,294	43,039	31,145	11,894	6,200	4,800	1,400
1967	49,891	36,241	13,650	43,891	31,641	12,250	6,000	4,600	1,400
1968	50,744	36,626	14,118	44,944	32,226	12,718	5,800	[4] 4,400	[4] 1,400
1969	51,119	36,797	14,322	45,619	32,597	13,022	5,500	4,200	1,300
1970	51,309	36,677	14,632	45,909	32,577	13,332	5,400	[5] 4,100	[5] 1,300
1971	51,381	36,265	15,116	46,081	32,265	13,816	5,300	4,000	1,300
1972	51,044	35,831	15,213	45,744	31,831	13,913	5,300	4,000	1,300
1973	50,729	35,353	15,377	45,429	31,353	14,077	5,300	4,000	1,300
1974	50,353	34,821	15,532	45,053	30,921	14,132	5,300	3,900	1,400
1975	50,138	34,445	15,694	44,838	30,545	14,294	5,300	3,900	1,400
					Projected[6]				
1976	49,693	33,972	15,721	44,393	30,072	14,321	5,300	3,900	1,400
1977	49,021	33,363	15,658	43,721	29,463	14,258	5,300	3,900	1,400
1978	48,154	32,653	15,501	42,854	28,753	14,101	5,300	3,900	1,400
1979	47,224	32,099	15,125	41,924	28,199	13,725	5,300	3,900	1,400
1980	46,409	31,776	14,633	41,109	27,876	13,233	5,300	3,900	1,400
1981	45,818	31,719	14,099	40,518	27,819	12,699	5,300	3,900	1,400
1982	45,413	31,823	13,590	40,113	27,923	12,190	5,300	3,900	1,400
1983	45,370	32,058	13,312	40,070	28,158	11,912	5,300	3,900	1,400
1984	45,624	32,346	13,278	40,324	28,446	11,878	5,300	3,900	1,400
1985	46,058	32,730	13,328	40,758	28,830	11,928	5,300	3,900	1,400

[1] Does not include independent nursery schools and kindergartens, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] Estimated unless otherwise noted. Estimates for 1971 through 1975 revised based on 1975 information from Curriculum Information Center and Market Data Retrieval. These estimates differ from figures shown in 1975 and earlier editions.

[3] Includes some pupils enrolled in grades 7 and 8 of nonpublic secondary schools from 1965 through 1968.

[4] Reported data from Office of Education surveys.

[5] Estimates are based on reported data from the Office of Education and the National Catholic Education Association.

[6] The projection of fall enrollment in regular day schools is based on the following assumptions: (a) Enrollment in regular public nursery schools and kindergartens will remain constant with respect to total public nursery schools and kindergartens at the 1975 level. (b) The enrollment rate of the 6-year-old population in public school grade 1 will remain constant at the 1975 level. (c) The retention rates of all other public school grades will remain constant at the average of the rates for the past 5 years. (d) Enrollment in grades K-8 and 9-12 in regular nonpublic day schools will remain constant at the 1975 levels through 1985.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on (1) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Statistics of Public Schools*, fall 1965 through 1975, (b) *Statistics of Nonpublic Elementary and Secondary Schools, 1970-71*, (c) *Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69*, (d) *Statistics of Nonpublic Elementary and Secondary Schools, 1965-66*, and (2) National Catholic Education Association publications: (a) *A Report on U.S. Catholic Schools, 1970-71*, and (b) *U.S. Catholic Schools*, 1971-72 through 1975-76.

The population projections, as of October 1, of 6-year-olds on which the enrollment projections in grade 1 are based, are consistent with Series II population projections in U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-25, No. 541, February 1975. The Series I, II, and III population projections, together with definitions of each series, are shown in appendix B, table B-1.

Table 4.--Enrollment in regular day schools, by institutional control and organizational level: United States, fall 1965 to 1985[1]

[In thousands]

Year (fall)	Total public and nonpublic			Public			Nonpublic (estimated)[2]		
	K-12	Elementary	Secondary	K-12	Elementary	Secondary	K-12	Elementary	Secondary
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1965	48,473	31,570	16,904	42,173	26,670	15,504	6,300	[3] 4,900	[3] 1,400
1966	49,239	31,905	17,334	43,039	27,105	15,934	6,200	4,800	1,400
1967	49,891	31,972	17,919	43,891	27,372	16,519	6,000	4,600	1,400
1968	50,744	31,763	18,981	44,944	27,363	17,581	5,800	[3] 4,400	[3] 1,400
1969	51,119	31,655	19,463	45,619	27,455	18,163	5,500	4,200	1,300
1970	51,309	31,601	19,708	45,909	27,501	18,408	5,400	[4] 4,100	[4] 1,300
1971	51,381	31,688	19,693	46,081	27,688	18,393	5,300	4,000	1,300
1972	51,044	31,323	19,721	45,744	27,323	18,421	5,300	4,000	1,300
1973	50,729	30,435	20,295	45,429	26,435	18,995	5,300	4,000	1,300
1974	50,353	30,282	20,071	45,053	26,382	18,671	5,300	3,900	1,400
1975	50,138	29,592	20,546	44,838	25,692	19,146	5,300	3,900	1,400
					Projected[5]				
1976	49,693	29,337	20,356	44,393	25,437	18,956	5,300	3,900	1,400
1977	49,021	28,888	20,133	43,721	24,988	18,733	5,300	3,900	1,400
1978	48,154	28,422	19,732	42,854	24,522	18,332	5,300	3,900	1,400
1979	47,224	28,059	19,165	41,924	24,159	17,765	5,300	3,900	1,400
1980	46,409	27,846	18,563	41,109	23,946	17,163	5,300	3,900	1,400
1981	45,818	27,801	18,017	40,518	23,901	16,617	5,300	3,900	1,400
1982	45,413	27,834	17,579	40,113	23,934	16,179	5,300	3,900	1,400
1983	45,370	28,031	17,339	40,070	24,131	15,939	5,300	3,900	1,400
1984	45,624	28,477	17,147	40,324	24,577	15,747	5,300	3,900	1,400
1985	46,058	29,106	16,952	40,758	25,206	15,552	5,300	3,900	1,400

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[1] Does not include independent nursery schools and kindergartens, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] Estimated unless otherwise noted. Estimates for 1971 through 1974 revised based on 1975 information from Curriculum Information Center and Market Data Retrieval.

[3] Reported data from Office of Education surveys.

[4] Estimates are based on reported data from the Office of Education and the National Catholic Education Association.

[5] The projection of fall enrollment in regular public day schools by organizational level is based on the assumption that the percentage of enrollment in grades 7 and 8 that will be organized as secondary enrollment will remain constant at the average of the 1973-1975 levels.

The projection of regular fall enrollment in nonpublic schools by organizational level is based on the assumption that substantially all nonpublic enrollment in grades 7 and 8 will continue as elementary enrollment.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on (1) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Statistics of Public Elementary and Secondary Day Schools*, fall 1965 through 1975, (b) *Statistics of Nonpublic Elementary and Secondary Schools, 1970-71*, (c) *Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69*, (d) *Statistics of Nonpublic Elementary and Secondary Schools*, 1965-66; and (2) National Catholic Education Association publications: (a) *A Report on U.S. Catholic Schools, 1970-71*, and (b) *U.S. Catholic Schools*, 1971-72 through 1975-76.

Table 5.--Summary of enrollment in all institutions of higher education, by degree-credit status and institutional type: United States, fall 1965 to 1985

[Resident and extension opening fall enrollment—in thousands]

Year (fall)	Total degree-credit and non-degree-credit enrollment	Degree-credit			Non-degree-credit		
		Total	4-year	2-year	Total	4-year	2-year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965	5,921	5,526	4,685	841	395	63	332
1966[1]	6,390	5,928	4,984	945	462	80	381
1967[1]	6,912	6,406	5,325	1,081	505	73	432
1968	7,513	6,928	5,639	1,289	585	82	503
1969	8,005	7,484	5,956	1,528	521	72	448
1970	8,581	7,920	6,290	1,630	661	68	593
1971	8,949	8,116	6,391	1,725	833	72	761
1972	9,215	8,265	6,473	1,792	950	76	874
1973	9,602	8,518	6,597	1,921	1,084	81	1,003
1974	10,224	9,023	6,825	2,198	1,200	87	1,113
1975	11,185	9,731	7,223	2,508	1,453	91	1,363
			Projected[2]				
1976	11,693	10,105	7,423	2,682	1,588	93	1,495
1977	12,146	10,423	7,589	2,834	1,723	93	1,630
1978	12,572	10,726	7,732	2,994	1,846	93	1,753
1979	12,928	10,962	7,832	3,130	1,966	93	1,873
1980	13,214	11,142	7,896	3,246	2,072	93	1,979
1981	13,477	11,301	7,940	3,361	2,176	93	2,083
1982	13,629	11,369	7,936	3,433	2,260	93	2,167
1983	13,643	11,330	7,850	3,480	2,313	93	2,220
1984	13,524	11,179	7,699	3,480	2,345	93	2,252
1985	13,360	11,000	7,530	3,470	2,360	93	2,267

[1] The breakdown between degree-credit and non-degree-credit enrollment in 1966 and 1967 is estimated. See appendix A, "Estimation Methods," secs. 3d-3g.

[2] For assumptions underlying these projections and for methods of projecting, see footnotes to table 6 and table A-1 in appendix A.

NOTE.—Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollment in Higher Education*, annually, 1965 through 1968, 1971 through 1975, (2) *Fall Enrollment in Higher Education, Supplementary Information*, 1969 and 1970, and (3) data from *Resident and Extension Enrollment in Institutions of Higher Education*, fall 1966 (unpublished).

Table 6.--Total enrollment in all institutions of higher education, by sex, by attendance status, and by institutional control: United States, fall 1965 to 1985

[Resident and extension opening fall enrollment]

Year (fall)	Total enrollment	Sex		Attendance status[1]		Control	
		Men	Women	Full-time	Part-time	Public	Private
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965	5,920,864	3,630,020	2,290,844	4,082,257	1,838,607	3,969,596	1,951,268
1966	6,390,000	3,856,000	2,534,000	4,438,000	1,952,000	4,349,000	2,041,000
1967	6,911,000	4,133,000	2,778,000	4,792,000	2,119,000	4,816,000	2,095,000
1968	7,513,091	4,479,649	3,035,442	5,210,155	2,302,936	5,430,652	2,082,439
1969	8,004,660	4,477,649	3,258,459	5,498,883	2,505,777	5,896,868	2,107,792
1970	8,580,887	5,043,642	3,537,245	5,815,290	2,765,597	6,428,134	2,152,753
1971	8,948,644	5,207,004	3,741,640	6,072,389	2,871,412	6,804,309	2,144,335
1972	9,214,860	5,238,757	3,976,103	6,022,389	3,142,471	7,070,635	2,144,225
1973	9,602,123	5,371,052	4,231,071	6,189,493	3,412,630	7,419,516	2,182,607
1974	10,223,729	5,622,429	4,601,300	6,370,273	3,853,456	7,988,500	2,235,229
1975	11,184,859	6,148,997	5,035,862	6,841,334	4,343,525	8,834,508	2,350,351
				Projected[2]			
1976	11,693,000	6,383,000	5,310,000	7,049,000	4,644,000	9,298,000	2,395,000
1977	12,146,000	6,575,000	5,571,000	7,220,000	4,926,000	9,716,000	2,430,000
1978	12,572,000	6,746,000	5,826,000	7,374,000	5,198,000	10,118,000	2,454,000
1979	12,928,000	6,890,000	6,038,000	7,485,000	5,443,000	10,464,000	2,464,000
1980	13,214,000	6,999,000	6,215,000	7,559,000	5,655,000	10,747,000	2,467,000
1981	13,477,000	7,092,000	6,385,000	7,615,000	5,862,000	11,012,000	2,465,000
1982	13,629,000	7,135,000	6,494,000	7,621,000	6,008,000	11,183,000	2,446,000
1983	13,643,000	7,085,000	6,558,000	7,545,000	6,098,000	11,232,000	2,411,000
1984	13,524,000	6,988,000	6,536,000	7,405,000	6,119,000	11,175,000	2,349,000
1985	13,360,000	6,865,000	6,495,000	7,243,000	6,117,000	11,070,000	2,290,000

[1] Estimated for all years prior to 1968. See appendix A, "Estimation Methods," sec. 3k.

[2] The projection of total degree-credit enrollment in all institutions of higher education, for each sex, is based primarily on the following assumptions: (a) The 1974 percentage that full-time undergraduate and unclassified enrollment was of the population aged 18-21 years will follow the 1965-to-1975 trend through 1985. (b) The percentage of full-time undergraduate and unclassified enrollment in public 2-year institutions will equal 100 percent less the percentage of full-time undergraudate and unclassified enrollment in the three other type and control categories of institutions; the percentage of full-time undergraduate and unclassified enrollment in the three other categories will each follow their 1968-to-1975 trend through 1985. (c) For each type and control category of institutions, the percentage that full-time undergraduate and unclassified enrollment is of total undergraduate and unclassified enrollment will follow the 1968-to-1975 trend through 1985. (d) The percentage that projected first-professional degrees for 1976-77 are of full-time first-professional enrollment in 1975 will remain constant through 1985. (e) The 1975 percentage of first-professional enrollment in public institutions will remain constant through 1985. (f) For each type and control category of institutions, the percentage that full-time first-professional enrollment was of total first-professional enrollment in 1975 will remain constant through 1985. (g) The percentage that full-time graduate enrollment is of full-time undergraduate and unclassified enrollment in 4-year institutions will follow the 1968-to-1975 trend through 1985. (h) The 1975 percentage of full-time graduate enrollment in public institutions will remain constant through 1985. (i) For each type and control category of institutions, the percentage that full-time graduate enrollment was of total graduate enrollment in 1975 will remain constant through 1985.

The projection of total non-degree-credit enrollment in all institutions by sex is based primarily on the assumption that full-time enrollment, expressed as a percentage of population aged 18-21 years, will follow the 1965-1975 trend to 1985.

For each sex, it was assumed that full-time non-degree-credit enrollment in public 4-year, private 4-year, and private 2-year institutions would remain constant at their 1975 levels.

For each type and control category of institutions it was assumed that the percentage that full-time non-degree-credit enrollment was of total non-degree-credit enrollment in 1975 would remain constant through 1985.

For further methodological details, see appendix A, table A-1.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCE: Enrollment data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollment in Higher Education*, annually, 1965 through 1968, 1971 through 1975 (2) *Fall Enrollment in Higher Education, Supplementary Information*, 1969 and 1970, and (3) unpublished data from *Resident and Extension Enrollment in Institutions of Higher Education*, fall 1966, and 1967.

Population on which projections are based is shown in appendix B, table B-2.

Table 7.--Total enrollment in 4-year institutions of higher education, by sex, by attendance status, and by institutional control: United States, fall 1965 to 1985

[Resident and extension opening fall enrollment]

Year Fall	Total enrollment	Sex		Attendance status[1]		Control	
		Men	Women	Full-time	Part-time	Public	Private
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965	4,747,912	2,896,381	1,851,531	3,439,547	1,308,365	2,928,332	1,819,580
1966	5,064,000	3,047,000	2,017,000	3,701,000	1,363,000	3,159,000	1,904,000
1967	5,398,000	3,218,000	2,181,000	3,972,000	1,426,000	3,444,000	1,955,000
1968	5,720,795	3,387,298	2,333,497	4,234,652	1,486,143	3,784,178	1,936,617
1969	6,028,002	3,555,490	2,472,512	4,441,791	1,586,211	4,050,144	1,977,858
1970	6,357,679	3,726,388	2,631,291	4,649,941	1,707,738	4,326,162	2,031,517
1971	6,462,733	3,757,846	2,704,887	4,786,684	1,676,049	4,438,442	2,024,291
1972	6,549,073	3,744,767	2,804,306	4,785,101	1,763,972	4,518,071	2,031,002
1973	6,678,266	3,766,818	2,911,448	4,808,444	1,869,822	4,616,290	2,061,976
1974	6,912,182	3,839,987	3,072,195	4,914,087	1,998,095	4,793,697	2,118,485
1975	7,313,567	4,035,689	3,277,878	5,134,623	2,178,944	5,095,217	2,218,350
				Projected[2]			
1976	7,516,000	4,120,000	3,396,000	5,239,000	2,277,000	5,258,000	2,258,000
1977	7,682,000	4,175,000	3,507,000	5,315,000	2,367,000	5,393,000	2,289,000
1978	7,825,000	4,213,000	3,612,000	5,376,000	2,449,000	5,516,000	2,309,000
1979	7,925,000	4,237,000	3,688,000	5,408,000	2,517,000	5,608,000	2,317,000
1980	7,989,000	4,244,000	3,745,000	5,414,000	2,575,000	5,674,000	2,315,000
1981	8,033,000	4,235,000	3,798,000	5,406,000	2,627,000	5,722,000	2,311,000
1982	8,029,000	4,208,000	3,821,000	5,368,000	2,661,000	5,738,000	2,291,000
1983	7,943,000	4,127,000	3,816,000	5,276,000	2,667,000	5,689,000	2,254,000
1984	7,792,000	4,023,000	3,769,000	5,141,000	2,651,000	5,599,000	2,193,000
1985	7,623,000	3,911,000	3,712,000	4,995,000	2,628,000	5,490,000	2,133,000

[1] Estimated for all years prior to 1968. See appendix A, "Estimation Methods," sec. 3k.

[2] For assumptions underlying these projections, see footnotes to table 6. For methodological details, see appendix A, table A-1.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollments in Higher Education,* annually, 1965 through 1968, 1971 through 1975. (2) *Fall Enrollment in Higher Education, Supplementary Information,* 1969 and 1970, and (3) unpublished data from *Resident and Extension Enrollment in Institutions of Higher Education,* fall 1966 and 1967.

Population on which projections are based is shown in appendix B, table B-2.

Table 8.--Total enrollment in 2-year institutions of higher education, by sex, by attendance status, and by institutional control: United States, fall 1965 to 1985

[Resident and extension opening fall enrollment]

Year (fall)	Total enrollment	Sex		Attendance status[1]		Control	
		Men	Women	Full-time	Part-time	Public	Private
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965	1,172,952	733,639	439,313	642,710	530,242	1,041,264	131,688
1966	1,326,000	809,000	517,000	737,000	589,000	1,190,000	137,000
1967	1,513,000	915,000	597,000	820,000	693,000	1,372,000	140,000
1968	1,792,296	1,090,351	701,945	975,503	816,793	1,646,474	145,822
1969	1,976,658	1,190,711	785,947	1,057,092	919,566	1,846,724	129,934
1970	2,223,208	1,317,254	905,954	1,165,349	1,057,859	2,101,972	121,236
1971	2,485,911	1,449,158	1,036,753	1,290,548	1,195,363	2,365,867	120,044
1972	2,665,787	1,493,990	1,171,797	1,287,288	1,378,499	2,552,564	113,223
1973	2,923,857	1,604,234	1,319,623	1,381,049	1,542,808	2,803,226	120,631
1974	3,311,547	1,782,442	1,529,105	1,456,186	1,855,361	3,194,803	116,744
1975	3,871,292	2,113,308	1,757,984	1,706,711	2,164,581	3,739,291	132,001
				Projected[2]			
1976	4,177,000	2,263,000	1,914,000	1,810,000	2,367,000	4,040,000	137,000
1977	4,464,000	2,400,000	2,064,000	1,905,000	2,559,000	4,323,000	141,000
1978	4,747,000	2,533,000	2,214,000	1,998,000	2,749,000	4,602,000	145,000
1979	5,003,000	2,653,000	2,350,000	2,077,000	2,926,000	4,856,000	147,000
1980	5,225,000	2,755,000	2,470,000	2,145,000	3,080,000	5,073,000	152,000
1981	5,444,000	2,857,000	2,587,000	2,209,000	3,235,000	5,290,000	154,000
1982	5,600,000	2,927,000	2,673,000	2,253,000	3,347,000	5,445,000	155,000
1983	5,700,000	2,958,000	2,742,000	2,269,000	3,431,000	5,543,000	157,000
1984	5,732,000	2,965,000	2,767,000	2,264,000	3,468,000	5,576,000	156,000
1985	5,737,000	2,954,000	2,783,000	2,248,000	3,489,000	5,580,000	157,000

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[1] Estimated for all years prior to 1968. See appendix A, "Estimation Methods," sec. 3k.

[2] For assumptions underlying these projections, see footnotes to table 6. For methodological details, see appendix A, table A-1.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollments in Higher Education*, annually, 1965 through 1968, 1971 through 1975. (2) *Fall Enrollment in Higher Education, Supplementary Information*, 1969 and 1970, and (3) unpublished data from *Resident and Extension Enrollment in Institutions of Higher Education*, fall 1966 and 1967.

Population on which projections are based is shown in appendix B, table B-2.

Table 9.--Estimated full-time-equivalent enrollment in all institutions of higher education, by degree-credit status and institutional control: United States, fall 1965 to 1985

[In thousands]

Year (fall)	All students			Students taking work creditable toward a bachelor's or higher degree			Students in occupational or general studies programs not chiefly creditable toward a bachelor's degree		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1965[1]	4,671	3,094	1,577	4,443	2,895	1,548	228	199	29
1966[1]	5,070	3,398	1,672	4,792	3,154	1,637	278	243	35
1967[1]	5,480	3,761	1,719	5,168	3,482	1,686	312	279	33
1968[1]	5,954	4,228	1,726	5,594	3,899	1,695	360	329	31
1969[1]	6,319	4,564	1,755	5,997	4,268	1,729	322	296	26
1970[1]	6,721	4,937	1,783	6,299	4,539	1,761	421	399	22
1971[1]	7,003	5,218	1,785	6,482	4,727	1,755	522	491	30
1972[2]	7,255	5,454	1,801	6,648	4,877	1,771	607	577	30
1973[2]	7,454	5,630	1,824	6,729	4,948	1,781	725	682	43
1974[2]	7,806	5,945	1,861	7,015	5,196	1,819	791	749	42
1975[2]	8,481	6,523	1,958	7,495	5,577	1,918	986	946	40
					Projected[3]				
1976	8,801	6,813	1,988	7,726	5,779	1,947	1,075	1,034	41
1977	9,079	7,070	2,009	7,914	5,946	1,968	1,165	1,124	41
1978	9,333	7,311	2,022	8,087	6,106	1,981	1,246	1,205	41
1979	9,524	7,499	2,025	8,198	6,214	1,984	1,326	1,285	41
1980	9,690	7,670	2,020	8,294	6,315	1,979	1,396	1,355	41
1981	9,824	7,812	2,012	8,359	6,388	1,971	1,465	1,424	41
1982	9,883	7,893	1,990	8,363	6,414	1,949	1,520	1,479	41
1983	9,840	7,886	1,954	8,285	6,372	1,913	1,555	1,514	41
1984	9,711	7,810	1,901	8,135	6,275	1,860	1,576	1,535	41
1985	9,546	7,700	1,846	7,960	6,155	1,805	1,586	1,545	41

[1] Estimated. See appendix A, "Estimation Methods," sec. 3p.

[2] Full-time-equivalent enrollment as reported by the individual institutions.

[3] Projections are primarily based on the assumption that for each type and control of institutions and for degree-credit and non-degree-credit enrollment separately, the percentage that the full-time equivalent of part-time enrollment was of part-time enrollment in 1975 would remain constant through 1985.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollment in Higher Education*, annually, 1965 through 1968, 1971 through 1975, (2) *Fall Enrollment in Higher Education, Supplementary Information*, 1969 and 1970, (3) unpublished data from *Resident and Extension Enrollment in Institutions of Higher Education*, fall 1966 and 1967, and (4) sample survey of full-time-equivalent enrollments and credit hours, fall 1964 (unpublished).

Table 10.–Summary of degree-credit enrollment in all institutions of higher education, by level and institutional type: United States, fall 1965 to 1985

[In thousands]

Year (fall)	Total degree-credit enrollment	Graduate (4-year)[1]	Undergraduate and first-professional (4-year)			Undergraduate (2-year)		
			Total[1]	First-time	Other[1]	Total	First-time	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1965	5,526	697	3,988	1,041	2,947	841	401	441
1966[2]	5,928	768	4,216	989	3,227	945	389	556
1967[2]	6,406	849	4,476	992	3,484	[illegible],081	447	634
1968	6,928	885	4,754	1,086	3,668	[illegible],289	554	735
1969	7,484	955	5,000	1,107	3,893	1,528	642	886
1970	7,920	1,031	5,259	1,126	4,133	1,630	654	976
1971	8,116	1,012	5,379	1,096	4,283	1,725	670	1,055
1972	8,265	1,066	5,407	1,065	4,342	1,792	675	1,117
1973	8,518	1,123	5,474	1,076	4,398	1,921	681	1,241
1974	9,023	1,190	5,635	1,128	4,507	2,198	727	1,471
1975	9,731	1,263	5,960	1,163	4,797	2,508	747	1,761
			Projected[3]					
1976	10,105	1,320	6,103	1,167	4,936	2,682	755	1,927
1977	10,423	1,367	6,222	1,172	5,050	2,834	761	2,073
1978	10,726	1,408	6,324	1,181	5,143	2,994	774	2,220
1979	10,962	1,439	6,393	1,178	5,215	3,130	776	2,354
1980	11,142	1,468	6,428	1,164	5,264	3,246	772	2,474
1981	11,301	1,489	6,451	1,148	5,303	3,361	763	2,598
1982	11,369	1,500	6,436	1,115	5,321	3,433	749	2,684
1983	11,330	1,498	6,352	1,068	5,284	3,480	719	2,761
1984	11,179	1,479	6,220	1,030	5,190	3,480	702	2,778
1985	11,000	1,456	6,074	1,016	5,058	3,470	693	2,777

[1] Estimated. See appendix A, "Estimation Methods," secs. 3a, 3b, 3h, and 3j.

[2] The breakdown between degree-credit and non-degree-credit enrollment in 1966 and 1967 is estimated. See appendix A, "Estimation Methods," secs. 3d and 3f.

[3] The projection of graduate enrollment in 4-year institutions is the same as that shown in table 14.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollments in Higher Education*, annually, 1965 through 1968, 1971 through 1975. (2) *Fall Enrollment in Higher Education, Supplementary Information*, 1969 and 1970, and (3) unpublished data from *Resident and Extension Enrollment in Institutions of Higher Education*, fall 1966 and 1967.

Population on which projections are based is shown in appendix B, table B-2.

Table 11.--First-time degree-credit enrollment in all institutions of higher education, by sex, by attendance status, and by institutional control: United States, fall 1965 to 1985

[Resident and extension opening fall enrollment]

Year (fall)	Total first-time degree-credit enrollment	Sex		Attendance status[1]		Control	
		Men	Women	Full-time	Part-time	Public	Private
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965	1,441,822	829,215	612,607	1,192,000	250,000	990,021	451,801
1966[2]	1,378,000	787,000	591,000	1,140,000	238,000	947,000	430,000
1967[2]	1,439,000	814,000	626,000	1,182,000	257,000	1,024,000	415,000
1968	1,629,751	924,580	705,171	1,328,329	301,422	1,200,784	428,967
1969	1,748,655	985,719	762,936	1,404,508	344,147	1,309,359	439,296
1970	1,780,119	983,794	796,325	1,426,488	353,631	1,337,896	422,223
1971	1,765,625	967,859	797,766	1,411,032	354,593	1,339,177	426,448
1972	1,740,438	928,804	811,634	1,369,316	371,122	1,322,903	417,535
1973	1,756,854	930,783	826,071	1,361,942	394,912	1,342,536	414,318
1974	1,854,442	972,707	881,735	1,408,958	445,484	1,435,981	418,461
1975	1,910,125	991,914	918,211	1,450,528	459,597	1,474,517	435,608
				Projected[3]			
1976	1,922,000	996,000	926,000	1,459,000	463,000	1,486,000	436,000
1977	1,933,000	1,000,000	933,000	1,466,000	467,000	1,496,000	437,000
1978	1,955,000	1,010,000	945,000	1,481,000	474,000	1,516,000	439,000
1979	1,954,000	1,010,000	944,000	1,480,000	474,000	1,518,000	436,000
1980	1,936,000	1,000,000	936,000	1,464,000	472,000	1,506,000	430,000
1981	1,911,000	986,000	925,000	1,444,000	467,000	1,489,000	422,000
1982	1,864,000	962,000	902,000	1,406,000	458,000	1,455,000	409,000
1983	1,787,000	920,000	867,000	1,349,000	438,000	1,396,000	391,000
1984	1,732,000	891,000	841,000	1,305,000	427,000	1,356,000	376,000
1985	1,709,000	877,000	832,000	1,288,000	421,000	1,339,000	370,000

[1] Estimated for all years prior to 1968. See appendix A, "Estimation Methods," sec. 2b.

[2] The breakdown between degree-credit and non-degree-credit enrollment in 1966 and 1967 is estimated. See appendix A, "Estimation Methods," sec. 2a.

[3] The projection of first-time opening fall degree-credit enrollment in all institutions of higher education by sex is based primarily on the assumption that full-time first-time enrollment expressed as a percentage of the population averaging 18 years of age, will follow the 1968 to 1975 trend through 1985.

For each sex, it was assumed that the percentage of full-time first-time degree-credit enrollment in public 2-year institutions will equal 100 percent less the percentage of full-time first-time degree-credit enrollment in the three other type and control categories of institutions; it was assumed that the percentage of full-time first-time degree-credit enrollment in the three other categories will each follow their 1968 to 1975 trends through 1985.

For each type and control category of institution, it was assumed that the percentage that full-time first-time degree-credit enrollment was of total first-time degree-credit enrollment in 1975 will remain constant through 1985.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollments in Higher Education,* annually, 1965 through 1968, 1971 through 1975. (2) *Fall Enrollment in Higher Education, Supplementary Information,* 1969 and 1970, and (3) unpublished data from *Resident and Extension Enrollment in Institutions of Higher Education,* fall 1966 and 1967.

Population on which projections are based is shown in appendix B, table B-2.

Table 12.--First-time degree-credit enrollment in 4-year institutions of higher education, by sex, by attendance status, and by institutional control: United States, fall 1965 to 1985

[Resident and extension opening fall enrollment]

Year (fall)	Total first-time degree-credit enrollment	Sex		Attendance status[1]		Control	
		Men	Women	Full-time	Part-time	Public	Private
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965	1,041,025	587,789	453,236	929,000	112,000	642,233	398,792
1966[2]	989,000	555,000	434,000	884,000	105,000	610,000	379,000
1967[2]	992,000	548,000	444,000	889,000	103,000	628,000	364,000
1968	1,076,077	591,443	484,634	966,094	109,983	705,891	370,186
1969	1,107,116	608,089	499,027	994,586	112,530	721,963	385,153
1970	1,126,368	608,823	517,545	1,013,031	113,337	736,879	389,489
1971	1,095,547	585,393	510,154	991,521	104,026	719,405	376,142
1972	1,065,128	560,035	505,093	968,578	96,550	693,283	371,845
1973	1,075,827	562,023	513,804	967,907	107,920	706,029	369,798
1974	1,127,794	585,923	541,871	1,005,802	121,992	753,795	373,999
1975	1,163,380	598,388	564,992	1,036,672	126,708	777,458	385,922
				Projected[3]			
1976	1,167,000	601,000	566,000	1,041,000	126,000	781,000	386,000
1977	1,172,000	603,000	569,000	1,045,000	127,000	785,000	387,000
1978	1,181,000	610,000	571,000	1,053,000	128,000	793,000	388,000
1979	1,178,000	610,000	568,000	1,051,000	127,000	793,000	385,000
1980	1,164,000	603,000	561,000	1,038,000	126,000	784,000	380,000
1981	1,148,000	596,000	552,000	1,023,000	125,000	775,000	373,000
1982	1,115,000	580,000	535,000	993,000	122,000	754,000	361,000
1983	1,068,000	556,000	512,000	952,000	116,000	723,000	345,000
1984	1,030,000	537,000	493,000	918,000	112,000	699,000	331,000
1985	1,016,000	530,000	486,000	906,000	110,000	690,000	326,000

[1] Estimated for all years prior to 1968. See appendix A, "Estimation Methods," sec. 2b.

[2] The breakdown between degree-credit and non-degree-credit enrollment in 1966 and 1967 is estimated. See appendix A, "Estimation Methods," sec. 2b.

[3] For assumptions underlying these projections, see footnotes to table 11. For methodological details, see appendix A, table A-1.

NOTE.—Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCE: Enrollment data from U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollment in Higher Education*, annually, 1965 through 1968, 1971 through 1975, (2) *Fall Enrollment in Higher Education, Supplementary Information*, 1969 and 1970, and (3) data from *Resident and Extension Enrollment in Institutions of Higher Education*, fall 1966 (unpublished).

Population on which projections are based is shown in appendix B, table B-2.

Table 13.--First-time degree-credit enrollment in 2-year institutions of higher education, by sex, by attendance status, and by institutional control: United States, fall 1965 to 1985

[Resident and extension opening fall enrollment]

Year (fall)	Total first-time degree-credit enrollment	Sex		Attendance status[1]		Control	
		Men	Women	Full-time	Part-time	Public	Private
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965	400,797	241,426	159,371	263,000	138,000	347,788	53,009
1966[2]	389,000	232,000	157,000	255,000	134,000	337,000	51,000
1967[2]	447,000	266,000	181,000	292,000	155,000	396,000	51,000
1968	553,674	333,137	220,537	362,235	191,439	494,893	58,781
1969	641,539	377,630	263,909	409,922	231,617	587,396	54,143
1970	653,751	374,971	278,780	413,457	240,294	601,017	52,734
1971	670,078	382,466	287,612	419,511	250,567	619,772	50,306
1972	675,310	368,769	306,541	400,738	274,572	629,620	45,690
1973	681,027	368,760	312,267	394,035	286,992	636,507	44,520
1974	726,648	386,784	339,864	403,156	323,492	682,186	44,462
1975	746,745	393,526	353,219	413,856	332,889	697,059	49,686
				Projected			
1976	755,000	395,000	360,000	418,000	337,000	705,000	50,000
1977	761,000	397,000	364,000	421,000	340,000	711,000	50,000
1978	774,000	400,000	374,000	428,000	346,000	723,000	51,000
1979	776,000	400,000	376,000	429,000	347,000	725,000	51,000
1980	772,000	397,000	375,000	426,000	346,000	722,000	50,000
1981	763,000	390,000	373,000	421,000	342,000	714,000	49,000
1982	749,000	382,000	367,000	413,000	336,000	701,000	48,000
1983	719,000	364,000	355,000	397,000	322,000	673,000	46,000
1984	702,000	354,000	348,000	387,000	315,000	657,000	45,000
1985	693,000	347,000	346,000	382,000	311,000	649,000	44,000

[1] Estimated for all years prior to 1968. See appendix A, "Estimation Methods," sec. 2b.

[2] The breakdown between degree-credit and non-degree-credit enrollment in 1966 and 1967 is estimated. See appendix A, "Estimation Methods," sec. 2b.

[3] For assumptions underlying these projections, see footnotes to table 11. For methodological details, see appendix A, table A-1.

NOTE.—Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCE: Enrollment data from U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollment in Higher Education*, annually, 1965 through 1968, 1971 through 1975, (2) *Fall Enrollment in Higher Education, Supplementary Information*, 1969 and 1970, and (3) data from *Resident and Extension Enrollment in Institutions of Higher Education*, fall 1966 (unpublished).

Population on which projections are based is shown in appendix B, table B-2.

Table 14.--Graduate enrollment in 4-year institutions of higher education, by sex, by attendance status, and by institutional control: United States, fall 1965 to 1985[1]

[In thousands]

Year (fall)	Total graduate degree-credit enrollment	Sex		Attendance status		Control	
		Men	Women	Full-time	Part-time	Public	Private
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965[2]	697	465	232	256	441	440	257
1966[2]	768	503	265	285	483	489	279
1967[2]	849	547	302	317	532	550	299
1968[2]	885	558	327	337	548	584	301
1969	955	590	366	364	591	666	289
1970	1,031	632	399	379	652	724	307
1971	1,012	615	397	388	624	712	300
1972	1,066	627	439	393	673	757	308
1973	1,123	647	476	409	714	799	324
1974	1,190	663	527	428	762	852	338
1975	1,263	700	563	453	810	906	357
				Projected[3]			
1976	1,320	726	594	473	847	948	372
1977	1,367	738	629	488	879	981	386
1978	1,408	751	657	501	907	1,011	397
1979	1,439	755	684	511	928	1,034	405
1980	1,468	762	706	520	948	1,058	410
1981	1,489	760	729	526	963	1,071	418
1982	1,500	760	740	529	971	1,082	418
1983	1,498	745	753	527	971	1,079	419
1984	1,479	729	750	519	960	1,067	412
1985	1,456	706	750	510	946	1,052	404

[1] Includes resident and extension graduate degree-credit enrollment. The estimates, 1965-68, and data, 1969-1972, differ from figures in 1973 and earlier editions of *Projections of Educational Statistics* because they include extension graduate enrollment, which previously was included in undergraduate and first-professional degree-credit enrollment figures.

[2] For method of estimating total graduate enrollment, 1965 to 1968, see appendix A, "Estimation Methods," secs. 3a, 3b, 3h, 3i, 3k, and 3l.

[3] The projection of graduate enrollment is based primarily on the assumptions that, for each sex, full-time graduate enrollment expressed as a percentage of full-time undergraduate and unclassified enrollment in 4-year institutions will follow the 1968 to 1975 trend through 1985 and that the percentage of full-time graduate enrollment in public institutions will remain constant through 1985. For each type and control category of institution, it was assumed that the percentage that full-time graduate enrollment was of total graduate enrollment in 1975 would remain constant through 1985.

NOTE.—Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollments in Higher Education*, annually, 1965 through 1968, 1971 through 1975. (2) *Fall Enrollment in Higher Education, Supplementary Information*, 1969 and 1970, and (3) unpublished data from *Resident and Extension Enrollment in Institutions of Higher Education*, fall 1966 and 1967, and (4) *Residence and Migration of College Students*, fall 1968.

CHAPTER III

High School Graduates and Earned Degrees

Martin M. Frankel and William C. Sonnenberg

Projections of High School Graduates

The projections of public high school graduates are based on the assumption that, for boys and girls separately, high school graduates expressed as a percentage of the average 18-year-old population will remain constant at the average of the 1973-74 through 1975-76 rates to 1985-86. In the early and mid-1960's, these rates were increasing, but in the late 1960's and early 1970's these rates leveled off. Therefore, projections made prior to the 1973 edition tended to be too high, by an average of about 1.5 percent 1 year out, up to a maximum of about 12 percent for 5 or more years out. Since 1973, when we began assuming a constant percentage of population increase, discrepancies between actual counts and projections have averaged about 1 percent. The current projections should be fairly accurate as long as the enrollment and graduation patterns of high school students remain consistent with those established over the past 7 or 8 years.

Although alternative projections of high school graduates are not shown in this publication, it is a simple matter for anyone wishing to make alternative assumptions to apply different percentages to the average 18-year-old populations in appendix table B-2.

Projections of nonpublic high school graduates are based on the assumption that the number of graduates will remain constant through 1985-86. This is consistent with similar assumptions regarding nonpublic secondary enrollment. The projections of nonpublic high school graduates should be considered as "best guesses" since the figures for 1964-65 to 1974-75 are estimates.

Projections of Bachelor's and First-Professional Degrees

Projections of bachelor's degrees by sex are based on the assumption that the percentage that bachelor's degrees are of first-time degree-credit enrollment 4-year earlier will follow the 1964-65 to 1974-75 trend through 1985-86. This means that the first 4 years of projections (1975-76 to 1978-79) are based on actual enrollments while the remaining 7 years of projections are based on projected enrollments. However, the projections of first-time degree-credit enrollment are primarily dependent on projections of the average 18-year-old population. Therefore, the projections of bachelor's degrees are for the most part demographically based.

The 1972 edition was the first to use the current methodology to project bachelor's degrees separately. Prior to 1972, bachelor's and first-professtional degrees were combined. The projections of bachelor's degrees made since 1972, which can be compared with actual degree figures, show about a 2-percent discrepancy from actual degree counts.

The projections are based on actual enrollments. Although it seems reasonable to assume that projections not based on actual first-time degree-credit enrollment would tend to be less reliable (since they are projected farther into the future, they would tend to be less reliable in any case), it is possible that the projections of bachelor's degrees, which are primarily dependent on projections of the average 18-year-old population, will show more stability than the projections of first-time degree-credit enrollment. This apparent anomoly might be the case, because the universe of earned bachelor's degrees has been much more consistent over the past 10 to 12 years than the universe of enrollments in institutions of higher education.

Projections of first-professional degrees are primarily dependent on projection of individual fields computed by the Bureau of Health Manpower and the American Bar Association. These projections are primarily dependent on the projected number of openings for 1st-year students in professional schools, since, historically, there have been more applicants than openings.

Projections of Master's and Doctor's Degrees

Projections of doctor's degrees by sex are based primarily on the assumption that the percentage that doctor's degrees are of the average 1st-year enrollment for advanced degrees 7 and 8 years earlier will follow the 1964-65 to 1974-75 trend through 1985-86. Master's degree projections by sex are based on the assumption that the percentage that master's degrees are of the average 1st-year enrollment for advanced degrees 1 and 2 years earlier will follow the 1964-65 to 1974-75 trend through 1985-86.

Projections of master's and doctor's degrees should be used with a great deal of caution, since they are subject to much more variation than bachelor's degrees. The numbers of these advanced degrees granted seem to be influenced by many of the same factors that affect total enrollment in institutions of higher education: cost, economic value, status value, etc. Therefore, projections of master's and doctor's degrees should be considered only as possible future values based on specific assumptions that do not allow for changes in past trends.

High School Graduates (table 15)

The number of high school graduates increased from 2.7 million in the school year 1964-65 to an estimated 3.1 million in 1975-76 and is expected to decrease to 2.7 million in 1985-86. These figures include graduates from all regular public and nonpublic high schools in the United States and, unlike the data on enrollments in chapter II, graduates from the following schools not in the regular school system: Federal schools for Indians, schools on Federal installations, residential schools for exceptional children, and subcollegiate departments of colleges and universities. Graduates of these schools comprise less than 1 percent of all high school graduates.

Two main sources form the basis for the figures quoted above. Graduates of regular public schools are reported each fall by the State departments of education. Graduates of regular nonpublic schools are reported in surveys of the schools by the Office of Education. Other graduates included above are estimated from various auxiliary sources.

High school graduates, as a percent of the population averaging 18 years old (table B-2), increased from 74 percent in 1964-65 to 76 percent by 1968-69. This percentage has since decreased to the present 74 percent, and is expected to increase slighly to 76 percent by 1985-86.

Earned Degrees

Earned-degrees reports from individual degree-granting institutions of higher education are received each fall by the National Center for Education Statistics. These provide information on the number of degrees granted, by level and sex and by academic field of concentration. They cover degrees granted during the academic year ending in June and include degrees earned in the prior summer.

Starting with the 1972 edition of *Projections of Educational Statistics,* two major changes were made. One change—the result of basing the survey of earned degrees on a new taxonomy—produced a new breakdown of earned degrees (the fields are shown in tables 16-21) consistent with that shown in *A Taxonomy of Instructional Programs in Higher Education.* To obtain the distribution of degrees by field for the back years, the earned degrees were redistributed as well as possible to conform to the nex taxonomy. For a complete listing of the instructional programs included in each field, see appendix A, "Classification of Degrees by Field of Study," pages 117-120.

The other change dealt with the principal levels of earned degrees that were reported and projected. In the years before the 1972 edition, three principal levels were projected: bachelor's, including first-professional degree; master's degrees; and doctorates. Now, bachelor's degrees and first-professional degrees are projected separately. Since 1960-61, first-professional degrees have been reported separately from bachelor's degrees, but the definitions of what constitutes a first-professional degree have not been uniform throughout the period. For that reason, no attempt was made in the past to project these degrees separately. (See appendix A, "Changes in Degree-Level Definitions," for a comparison of these definitions.) Recently, however, a stable definition of first-professional degrees has been established, and reporting is expected to be reasonably uniform in the future.

Earned degrees, by level and sex (table 16)

Projected degrees by level and sex are shown in table 16. Based on reports through 1974-75, the total numbers, by level, are expected to increase as follows:

Level of degree	Granted 1965-66	Estimated 1975-76	Projected 1985-86
Bachelor's	520,000	909,000	953,000
First-professional	31,000	59,000	72,000
Master's	141,000	316,000	405,000
Doctorate	18,000	35,000	42,000

Earned degrees, by level and field (tables 17-21)

The fields presented are divided into three main groups at each level, except first-professional. These groups are (a) social sciences, (b) humanities, and (c) natural sciences and miscellaneous fields. The fields included in the three groups and the percentage distribution of degrees by level and field for the years 1965-66, 1975-76, and 1985-86 are shown in table 17. The projected number of earned degrees by field is shown in tables 18-21, one for each of the four levels.

The projections are based mainly on the assumption that the percentage distribution of degrees by field for each sex as calculated from data reported annually to NCES will continue the 1964-65 to 1974-75 trends through 1985-86 or else remain at approximately the 1974-75 rates through 1985-86.

Since these projections are dependent, to a large extent, on projections of degrees by level for all fields, the caveats presented at the beginning of this chapter should be taken into account when using these projections of degrees by field of study.

Related data from independent sources, taken into consideration in making these projections, include: Reports on junior year enrollments, by field, for 1973 and 1974 as prepared by the Higher Education Panel of the American Council on Education; survey data collected by the Engineers Joint Council for projecting engineering degrees; survey data from the American Institute of Certified Public Accountants for bachelor's degree projections in accounting; data from the Health Resources Administration, Bureau of Health Manpower, for health-degree projections; and data from the American Bar Association for law-degree projections.

Bachelor's degrees, by field (table 18)

The number of bachelor's degrees awarded in all fields increased sharply from 520,000 in 1965-66 to 909,000 in 1975-76, and is expected to continue increasing, reaching 1,022,000 degrees in 1981-82. The number is then expected to decrease to 953,000 by 1985-86. The numbers of degrees awarded in the three major areas all follow this same pattern, each reaching a maximum in 1981-82 (Social Sciences-236,940, humanities-154,240, natural sciences and miscellaneous fields-630,820).

Of the individual fields, the number of bachelor's degrees granted in the health professions has made the most notable increase in the past 10 years (increasing from 15,848 in 1965-66 to 52,370 in 1975-76).

This trend is expected to continue thorughout the next 10-year period, with the number of degrees increasing to just over 69,000 in 1985-86. Other fields showing a significant increase in the number of degrees granted in the next 10 years include computer and information sciences, public affairs and services, architecture and environmental design, communications, and biological sciences.

Of those fields decreasing in numbers of bachelor's degrees conferred, mathematics and statistics and education have shown the most noteworthy decline. The number of degrees in mathematics and statistics has gone from a high of 27,442 in 1969-70 to the present 17,190. This amounts to a decrease of 10,000 in just 6 years. This trend is expected to continue, with the number of degrees reaching 14,600 in 1985-86. The amount of degrees granted in education is expected to decrease from nearly 162,050 in 1975-76 to 136,770 in 1985-86, a drop of 25,000. Other fields showing nearly continuous decreases during the next 10 years will be social sciences, foreign languages, and letters.

Master's degrees, by field (table 19)

The number of master's degrees conferred is expected to increase in two of the three major areas over the next 10 years, (social sciences from 52,070 in 1975-76 to 63,130 in 1985-86, and natural sciences and miscellaneous fields from 232,150 to 305,840). The number of degrees conferred in humanities is expected to increase to about 37,000 in 1979-80, then remain nearly constant at that level to 1985-82.

While the number of degrees conferred in letters is expected to drop from 12,280 in 1975-76 to 8,470 in 1985-86, degrees in the other humanities will increase significantly to maintain the constancy of the total.

The number of degrees conferred in the remainder of the fields will either increase steadily or remain constant throughout the next 10 years. The most significant increases will occur in the health professions, other business and management, and education fields, where the number of degrees will increase 10,000, 20,000, and 40,000 respectively.

Doctor's degrees, by field (table 20)

Projections of the number of doctor's degrees in the three major areas show increases over the next 10 years (social sciences from 7,700 in 1975-76 to 9,470 in 1985-86, humanities from 4,270 to 4,480, and natural sciences and miscellaneous from 23,030 to 28,050).

In the fields of foreign languages, mathematics and statistics, engineering, and physical sciences, the number of degrees is expected to decrease significantly. The number of degrees in the other fields is expected to remain constant or increase slightly, with psychology (from 2,580 in 1975-76 to 4,030 in 1985-86) and education from 7,640 to 11,400) showing the largest increases.

First-professional degrees, by field (table 21)

Data from independent sources were used extensively in making projections of first-professional degrees by field of study. The following methods were used to project these degrees: Medicine, dentistry, and other health professions were projected by the Health Resources Administration, Bureau of Health Manpower. Law-degree projections were based on unpublished projections of first-year law students provided by the American Bar Association.

Law degrees which have increased from 13,481 degrees in 1965-66 to an estimated 30,500 in 1975-76 are expected to increase much more slowly during the next 10 years, reaching 34,900 in 1985-86.

Degrees in medicine increased from 7,673 degrees in 1965-66 to an estimated 13,700 in 1975-76 and are expected to continue increasing, reaching 19,000 in 1985-86.

Figure 3.--High school graduates: United States, 1965-66 to 1985-86

(Data from table 20)

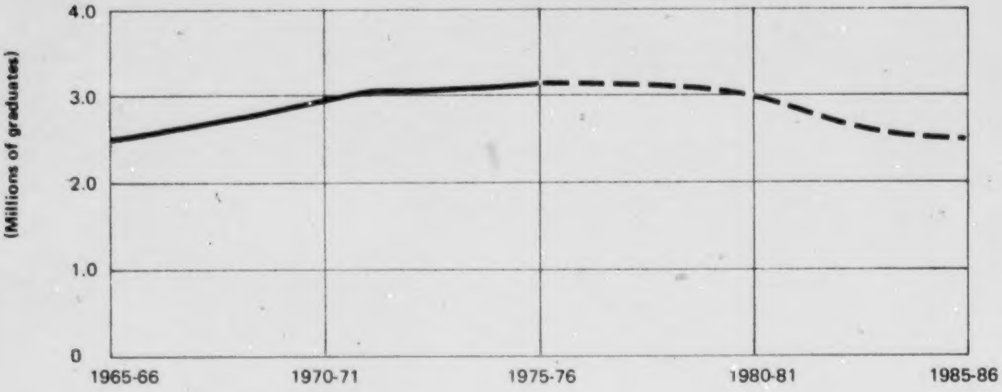

Figure 4.--Earned degrees, by level, United States, 1965-66 to 1985-86

(Data from table 21)

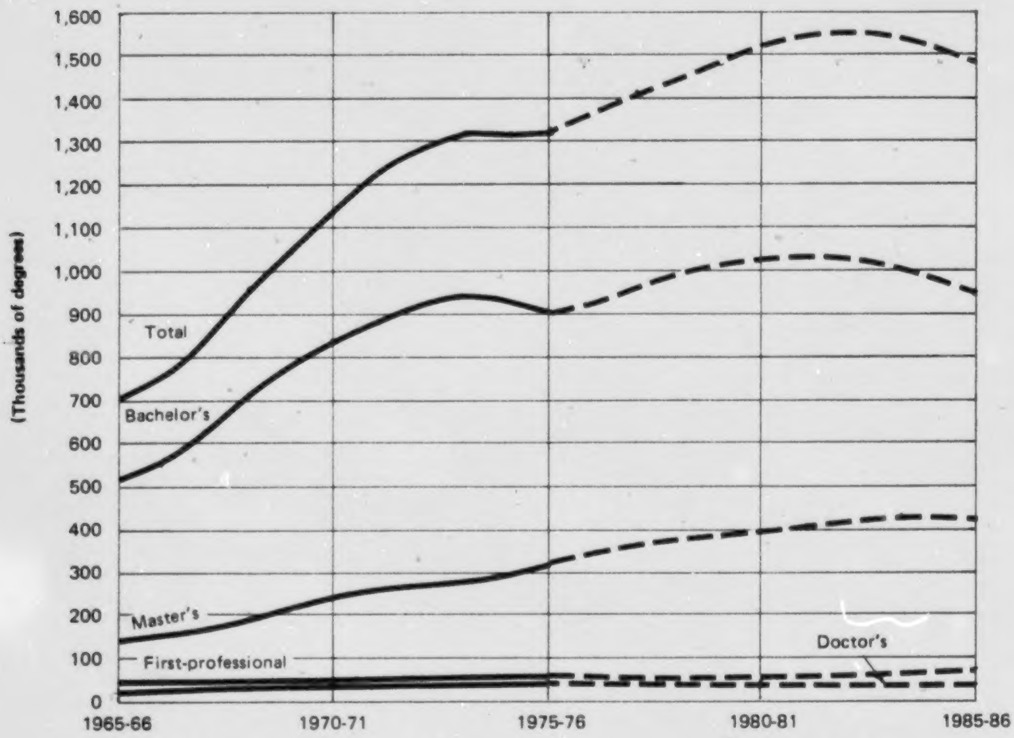

Table 15.–High school graduates, by sex and by institutional control: United States, 1964-65 to 1985-86

[In thousands]

Year	Total high school graduates[1]	Sex		Control	
		Boys	Girls	Public	Private (estimated)
(1)	(2)	(3)	(4)	(5)	(6)
1964-65	2,665	1,314	1,351	2,366	[2] 298
1965-66	2,632	1,308	1,325	2,334	[2] 298
1966-67	2,679	1,332	1,348	2,381	298
1967-68	2,702	1,341	1,360	2,402	300
1968-69	2,829	1,402	1,427	2,529	300
1969-70	2,896	1,433	1,463	2,596	300
1970-71	2,943	1,456	1,487	2,643	[3] 300
1971-72	3,006	1,490	1,516	2,706	[3] 300
1972-73	3,039	1,501	1,538	2,737	[3] 302
1973-74	3,077	1,513	1,564	2,771	[3] 306
1974-75	3,140	1,541	1,599	2,830	[3] 310
1975-76[4]	3,135	1,543	1,592	2,825	310
			Projected[5]		
1977-77	3,132	1,541	1,591	2,822	310
1977-78	3,143	1,547	1,596	2,833	310
1978-79	3,127	1,540	1,587	2,817	310
1979-80	3,080	1,517	1,563	2,770	310
1980-81	3,030	1,493	1,537	2,720	310
1981-82	2,941	1,448	1,493	2,632	310
1982-83	2,821	1,389	1,432	2,511	310
1983-84	2,727	1,343	1,384	2,417	310
1984-85	2,679	1,320	1,359	2,369	310
1985-86	2,681	1,321	1,360	2,371	310

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[1] Includes regular public and nonpublic schools, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, and federally operated schools on Federal installations. Excludes equivalency certificates. More than 99 percent of public school graduates and 97 percent of nonpublic school graduates are graduates of regular day schools.

[2] Reported data from Office of Education surveys.

[3] Estimates based on revised nonpublic secondary enrollment (table 4). These revised estimates of nonpublic high school graduates differ from figures shown in 1975 and earlier editions.

[4] Estimated.

[5] The projection of public high school graduates is based on the assumption that for boys and girls separately, the number of high school graduates expressed as a percentage of the population averaging 18 years of age will remain constant at the average of the rates for 1972-73 to 1974-75.

The projection of nonpublic high school graduates is based on the following assumptions: (1) The number of nonpublic high school graduates will remain approximately the same throughout the projection period. (2) The percentage of boys among nonpublic high school graduates (48.1 percent in 1964-65) will remain constant to 1985-86.

For further methodological details, see appendix A, table A-2.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: High school graduate data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Statistics of Public Schools*, annually, fall 1965 through 1975, (2) *Statistics of Nonpublic Elementary and Secondary Schools, 1965-66*, and (3) *Nonpublic School Enrollments in Grades 9-12, Fall 1964, and Graduates, 1963-64*.

Table 16.--Earned degrees, by level and by sex of student: United States, 1964-65 to 1985-86

Year (1)	Bachelor's degrees[1]			First-professional degrees[2]			Master's degrees[3]			Doctor's degrees (exept first-professional)[4]		
	Total (2)	Men (3)	Women (4)	Total (5)	Men (6)	Women (7)	Total (8)	Men (9)	Women (10)	Total (11)	Men (12)	Women (13)
1964-65 . .	501,248	288,538	212,710	28,755	27,748	1,007	117,152	77,544	39,608	16,467	14,692	1,775
1965-66 . .	520,248	299,196	221,052	30,799	29,657	1,142	140,548	93,063	47,485	18,237	16,121	2,116
1966-67 . .	558,075	322,171	235,904	32,472	31,178	1,294	157,707	103,092	54,615	20,617	18,163	2,454
1967-68 . .	631,923	357,270	274,653	34,787	33,237	1,550	176,749	113,519	63,230	23,089	20,183	2,906
1968-69 . .	728,167	409,881	318,286	36,018	34,499	1,519	193,756	121,531	72,225	26,188	22,752	3,436
1969-70 . .	791,510	450,234	341,276	35,724	33,940	1,784	208,291	125,624	82,667	29,866	25,890	3,976
1970-71 . .	839,730	475,594	364,136	37,946	35,544	2,402	230,509	138,146	92,363	32,107	27,530	4,577
1971-72 . .	887,273	500,590	386,683	43,411	40,723	2,688	251,633	149,550	102,083	33,363	28,090	5,273
1972-73 . .	922,362	518,191	404,171	50,018	46,489	3,529	263,371	154,468	108,903	34,777	28,571	6,206
1973-74 . .	945,776	527,313	418,463	53,816	48,530	5,286	277,033	157,842	119,191	33,816	27,365	6,451
1974-75 . .	922,933	504,841	418,092	55,916	48,956	6,960	292,450	161,570	130,880	34,083	26,817	7,266
1975-76[5] . .	909,000	484,000	425,000	58,690	49,420	9,270	316,000	173,000	143,000	35,000	27,000	8,000
						Projected[6]						
1976-77 . .	918,000	485,000	433,000	60,100	48,790	11,310	338,000	185,000	153,000	37,000	28,000	9,000
1977-78 . .	969,000	507,000	462,000	63,480	49,880	13,600	356,000	194,000	162,000	37,000	28,000	9,000
1978-79 . .	998,000	517,000	481,000	64,730	49,950	14,780	370,000	200,000	170,000	36,000	27,000	10,000
1979-80 . .	1,005,000	520,000	485,000	65,400	49,750	15,650	382,000	205,000	177,000	36,000	26,000	10,000
1980-81 . .	1,011,000	522,000	489,000	67,270	50,590	16,680	392,000	208,000	184,000	37,000	26,000	11,000
1981-82 . .	1,022,000	527,000	495,000	68,700	51,220	17,480	402,000	212,000	190,000	39,000	27,000	12,000
1982-83 . .	1,017,000	522,000	495,000	69,920	51,660	18,260	408,000	214,000	194,000	40,000	28,000	12,000
1983-84 . .	1,005,000	514,000	491,000	70,840	51,860	18,980	412,000	214,000	198,000	41,000	28,000	13,000
1984-85 . .	987,000	502,000	485,000	71,570	51,930	19,640	410,000	211,000	199,000	42,000	28,000	14,000
1985-86 . .	953,000	480,000	473,000	71,980	51,720	20,260	405,000	207,000	198,000	42,000	28,000	14,000

[1] In the 1971 and prior editions of *Projections of Educational Statistics,* bachelor's degrees were not shown separately but were combined with first-professional degrees.

[2] The following specified degrees are reported as first-professional: Dentistry (D.D.S. or D.M.D.), law (LL.B or J.D.), medicine (M.D.), theology, veterinary medicine (D.V.M.), chiropody or podiatry (D.S.C. or D.P.), optometry (O.D.), and osteopathy (D.O.).

[3] Master's degrees differ from those published in the 1968 and prior editions of *Projections of Educational Statistics* because of adjustments to secure comparability with current reports of these degrees. For estimation details, see appendix A, "Estimation Methods," sec. 1. Master's degrees also differ from those published in the 1969 through 1971 editions because of discrepancies among the reported numbers of degrees.

[4] Doctor's degrees include the Ph.D. in any field as well as such degrees as doctor of education, doctor of juridical science, and doctor of public health (preceded by a professional degree in medicine or sanitary engineering). They exclude degrees defined as first-professional, such as doctor of veterinary medicine.

[5] Estimated.

[6] The estimation and projection of degrees by level and sex of student are based on the following assumptions:

(A) The estimates of bachelor's degrees by sex for 1975-76 and the projections of these degrees through 1985-86 assume that the percentage that degrees in these years are of first-time degree-credit enrollment 4 years earlier will follow the 1964-65 to 1974-75 trend through 1985-86; the projections for 1979-80 through 1985-86 are based on the projected first-time degree-credit enrollment figures in table 14.

(B) The estimates of total first-professional degrees for 1975-76 and the projections of these degrees through 1985-86 were obtained by summing the number of degrees in the individual field. (For methods of projecting first-professional degrees in individual fields, see footnotes to table 21.) The estimates of first-professional degrees by sex for 1974-75 and the prjections of these degrees through 1985-86 assume that the percentage of degrees conferred on women in each field of study would follow the 1964-65 to 1978-79 trend through 1985-86. For 1975-76 through 1978-79, the estimate of the percentage of degrees conferred on women in each field was assumed to be the same as the percentage of women enrolled in the first year of first-professional programs in the same field either 3 or 4 years earlier. For law, theology, and "other" a 3-year time lag was used. For medicine, dentistry, and "other health profession," a 4-year time lag was used.

(C) The estimates of master's degrees by sex for 1975-76 and projections through 1985-86 assume that the percentage that master's degrees are of the average of first-year enrollment for advanced degrees 1 and 2 years earlier will follow the 1964-65 to 1974-75 trend through 1985-86. The estimates of first-year enrollment for advanced degrees by sex for 1975 and projections through 1985 assume that the 1974 percentage that first-year enrollment for advanced degrees was of graduate enrollment will remain constant through 1985-86 (49.4 percent for men and 52.8 percent for women).

(D) The estimates of doctor's degrees by sex for 1975-76 and projections through 1985-86 assume that the percentage that doctor's degrees are of the average of first-year enrollment for advanced degrees 7 and 8 years earlier will follow the 1964-65 to 1974-75 trend through 1985-86.

For further methodological details, see appendix A, table A-2.

NOTE.—Data include 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Degree and enrollment data and estimates are based on (a) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Earned Degrees Conferred by Institutions of Higher Education,* 1964-65 through 1974-75, (b) *Opening (Fall) Enrollment in Higher Education,* 1964 through 1968 and 1971 through 1974, (c) *Enrollment for Advanced Degrees,* fall 1961, 1962 and 1963, (d) *Enrollment for Master's and Higher Degrees, Fall 1964,* (e) *Enrollment for Master's and Higher Degrees, Fall 1965: Summary Report,* (f) *Students Enrolled for Advanced Degrees,* fall 1966 through 1974, (g) *Fall enrollment in Higher Education, Supplementary Information,* 1969 and 1970; and (2) American Bar Association publication; Millard H. Ruud, "That Burgeoning Law School Enrollment Slows," *American Bar Association Journal,* 59: 150-153, February 1973.

Table 17.--Percentage distribution of earned degrees, by field of study and level: United States, 1965-66 to 1985-86

Year	A. Social sciences					B. Humanities					
	Total social sciences	Social science	Psy-chology	Public affairs and services	Library sciences	Total humanities	Architecture and environmental design	Fine and applied arts	Foreign languages	Communi-cations	Letters
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
						Bachelors's					
1965-66	21.3	17.5	3.2	0.4	0.1	16.7	0.5	3.6	2.9	0.6	9.1
1975-76	23.4	14.2	5.5	3.6	0.1	15.4	0.9	4.4	1.9	2.2	5.9
1985-86	22.7	10.6	5.4	6.6	0.1	15.2	1.4	4.4	1.5	4.1	3.7
						Master's					
1965-66	16.0	8.3	1.7	3.3	2.8	12.6	0.5	3.6	2.4	0.4	5.7
1975-76	16.5	6.0	2.4	5.3	2.7	10.1	1.1	2.8	1.3	1.0	3.9
1985-86	15.6	4.5	2.6	6.1	2.4	8.9	1.6	2.8	1.1	1.3	2.1
						Doctor's					
1965-66	17.2	10.9	5.7	0.5	0.1	11.3	0.1	2.6	2.3	0.1	6.2
1975-76	22.0	13.5	7.4	0.9	0.2	12.2	0.3	1.9	2.4	0.5	7.1
1985.86	22.5	11.1	9.6	1.6	0.2	10.7	0.4	1.9	1.5	0.5	6.4

Year	C. Natural sciences and miscellaneous fields											
	Total natural sciences and miscellaneous fields	Mathematics and statistics	Computer and information sciences	Engineering	Physical sciences	Biological sciences	Agriculture and natural resources	Health professions	Accounting	Other business and management	Education	Other
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
						Bachelor's						
1965-66	62.0	3.8	L	7.3	3.3	5.1	1.5	3.0	2.9	9.4	22.1	3.5
1975-76	61.2	1.9	0.6	5.3	2.3	5.6	1.8	5.8	3.8	10.9	17.8	5.4
1985-86	62.1	1.5	1.1	6.6	2.3	6.7	1.9	7.2	4.3	10.7	14.4	5.4
						Master's						
1965-66	71.4	3.4	0.2	9.8	3.5	3.0	1.4	2.0	0.6	8.7	35.5	3.2
1975-76	73.5	1.4	0.8	5.0	1.9	2.2	1.0	3.8	0.8	12.1	41.0	3.4
1985-86	75.5	1.1	0.9	3.6	1.5	2.0	1.0	5.2	1.2	14.3	41.4	3.3
						Doctor's						
1965-66	71.5	4.3	0.1	12.7	16.7	11.5	3.9	1.4	0.2	2.0	16.6	2.1
1975-76	65.8	2.6	0.7	8.3	10.2	10.2	2.9	2.2	0.2	2.9	21.8	3.8
1985-86	66.8	1.4	1.0	4.9	5.4	10.4	4.0	4.3	0.3	4.1	27.1	3.8

NOTE.—Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

L = less than 0.05

Table 18.--Earned bachelor's degrees, by field of study: United States, 1964-65 to 1985-86[1]

	A. Social sciences					B. Humanities					
Year (1)	Total social sciences (2)	Social sciences (3)	Psy-chology (4)	Public affairs and services (5)	Library sciences (6)	Total humani-ties (7)	Architecture and environmental design (8)	Fine and applied arts (9)	Foreign languages (10)	Com-muni-cations (11)	Letters (12)
1964-65 . . .	99,240	82,224	14,527	1,866	623	80,197	2,333	17,391	13,859	2,814	43,800
1965-66 . . .	110,723	91,198	16,841	2,042	642	87,017	2,663	18,679	15,186	3,131	47,358
1966-67 . . .	124,414	102,132	19,303	2,278	701	96,074	2,937	21,548	16,706	3,519	51,364
1967-68 . . .	145,902	118,426	23,768	2,894	814	110,344	3,262	25,521	19,128	4,363	58,070
1968-69 . . .	172,616	138,478	29,295	3,843	1,000	127,905	3,477	31,588	21,493	5,197	66,150
1969-70 . . .	190,395	151,391	33,536	4,414	1,054	134,675	4,105	35,901	20,895	5,959	67,815
1970-71 . . .	205,931	157,818	37,880	9,220	1,013	139,833	5,570	30,394	19,945	10,802	73,122
1971-72 . . .	217,768	161,081	43,093	12,605	989	144,713	6,440	33,831	18,849	12,340	73,253
1972-73 . . .	223,058	156,361	47,695	17,843	1,159	147,220	6,962	36,017	18,964	14,317	70,960
1973-74 . . .	227,756	150,821	51,821	23,950	1,164	148,445	7,822	39,730	18,840	17,096	64,957
1974-75 . . .	215,891	135,674	50,988	28,160	1,069	143,439	8,226	40,782	17,606	19,248	57,577
1975-76[2] . .	212,640	128,740	49,760	33,040	1,100	139,810	8,390	40,080	16,980	20,360	54,000
						Projected[3]					
1976-77 . . .	213,660	124,030	49,870	38,650	1,110	139,900	8,860	40,230	16,700	22,160	51,950
1977-78 . . .	225,650	125,920	52,550	45,990	1,190	147,240	9,840	42,480	17,230	25,170	52,520
1978-79 . . .	232,480	125,200	54,060	51,990	1,230	151,250	10,540	43,780	17,370	27,790	51,770
1979-80 . . .	234,060	122,280	54,340	56,210	1,230	151,930	11,190	44,000	17,080	29,840	49,820
1980-81 . . .	235,020	119,610	54,590	59,580	1,240	152,650	11,830	44,220	16,840	31,920	47,840
1981-82 . . .	236,940	117,880	55,180	62,630	1,250	154,240	12,490	44,700	16,640	34,190	46,220
1982-83 . . .	234,810	114,520	54,930	64,110	1,250	153,670	12,990	44,540	16,300	35,970	43,870
1983-84 . . .	230,700	110,610	54,250	64,600	1,240	151,950	13,350	44,010	15,830	37,450	41,310
1984-85 . . .	225,320	106,410	53,310	64,370	1,230	149,490	13,650	43,290	15,310	38,620	38,620
1985-86 . . .	216,150	100,650	51,540	62,770	1,190	144,780	13,670	41,920	14,640	39,110	35,440

	C. Natural sciences and miscellaneous fields											
Year	Total natural sciences and miscella-neous fields (2)	Mathe-matics and statis tics (3)	Computer and info-mation sciences (4)	Engin-eering[4] (5)	Phys-ical sciences (6)	Bio-logical sciences (7)	Agricul-ture and natural resources (8)	Health profes-sions (9)	Ac-count-ing (10)	Other busi-ness and manage-ment (11)	Educa-tion (12)	Other[5] (13)
1964-65 . .	321,811	19,460	87	38,514	17,859	24,872	7,377	15,444	14,886	48,169	116,529	18,614
1965-66 . .	322,508	19,977	89	37,971	17,129	26,565	7,863	15,848	14,903	48,736	115,173	18,254
1966-67 . .	337,587	21,207	222	38,696	17,739	28,483	8,636	16,541	15,593	54,418	117,482	18,570
1967-68 . .	375,677	23,513	459	40,541	19,380	31,429	9,215	18,170	17,922	62,670	132,087	20,291
1968-69 . .	427,646	27,209	933	45,517	21,480	34,989	10,965	20,230	20,032	74,501	148,554	23,236
1969-70 . .	466,440	27,442	1,544	49,678	21,439	37,031	12,382	22,141	21,183	84,871	161,904	26,825
1970-71 . .	493,966	24,801	2,388	50,046	21,412	35,743	12,672	25,226	22,099	93,428	176,571	29,580
1971-72 . .	524,792	23,713	3,402	51,164	20,745	37,293	13,516	28,611	24,801	97,208	191,172	33,167
1972-73 . .	552,084	23,067	4,304	51,265	20,696	42,233	14,756	33,564	27,947	98,883	194,210	41,159
1973-74 . .	569,575	21,635	4,756	50,286	21,178	48,340	16,253	41,459	29,341	103,043	185,181	48,103
1974-75 . .	562,903	17,446	5,033	46,852	20,778	51,741	17,528	49,090	31,116	102,706	166,969	53,644
1975-76[2] .	556,550	17,190	5,320	48,200	20,590	51,210	16,770	52,370	34,250	99,110	162,050	49,490
						Projected[3]						
1976-77 . .	564,440	16,820	5,820	52,300	20,590	52,520	16,910	54,610	36,450	99,050	159,720	49,650
1977-78 . .	596,110	17,300	6,610	58,510	21,610	56,530	17,800	58,270	37,760	103,810	165,540	52,370
1978-79 . .	614,270	17,380	7,310	62,060	22,190	59,420	18,380	60,730	39,100	106,460	167,310	53,930
1979-80 . .	619,010	17,130	7,890	63,090	22,390	61,050	18,670	62,480	40,050	107,450	164,590	54,220
1980-81 . .	623,330	16,860	8,460	64,030	22,580	62,540	18,880	64,330	41,150	108,200	161,830	54,470
1981-82 . .	630,820	16,740	9,200	65,400	22,900	64,360	19,260	66,280	42,050	109,670	159,890	55,070
1982-83 . .	628,520	16,400	9,680	65,570	22,820	65,120	19,310	67,440	42,260	109,220	155,850	54,850
1983-84 . .	622,350	15,890	10,080	65,340	22,590	66,080	19,220	68,310	42,150	108,070	150,440	54,180
1984-85 . .	612,190	15,320	10,400	64,620	22,210	65,640	18,970	69,200	41,800	106,180	144,580	53,270
1985-86 . .	592,140	14,600	10,490	62,650	21,480	64,050	18,490	69,070	40,680	102,310	136,770	51,550

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[1] The breakdown of earned degrees into fields shown in this table differs from the breakdown in 1971 and earlier editions. The present breakdown of earned degrees by field of study is consistent with that shown in *A Taxonomy of Instructional Programs in Higher Education.* To obtain the distribution of degrees by field for the years prior to 1970-71, earned degrees were redistributed as well as possible to conform to the new taxonomy. For a complete listing of the instructional programs included in each field, see appendix A, "Classification of Degrees by Field of Study," pages 117-120.

[2] Estimated.

[3] The projections are based mainly on the assumption that the percentage distribution of degrees by field for each sex will continue the 1964-65 to 1974-75 trends through 1985-86 or else remain at approximately the 1974-75 rates through 1985-86. The following are exceptions to the above assumptions: (1) In engineering, data on enrollment by level in engineering programs from the Engineering Manpower Commission of Engineers Joint Council were used in making projections. (2) In accounting, the 1975-76 through 1979-80 projections are based on projections from the American Institute of Certified Public Accountants.

[4] Includes engineering technology degrees. Engineering technology degrees, reported at 7,464 in 1974-75, are expected to number 7,500, 7,900, 8,500, 9,100, 9,800, 10,300, 10,500, 10,700, 10,800, and 10,600 from 1975-76 through 1985-86.

[5] Includes home economics, law, military sciences, theology, and interdisciplinary studies.

NOTE.—Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: (1) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Earned Degrees Conferred by Institutions of Higher Education*, annually, 1964-65 through 1974-75, (b) *A Taxonomy of Instructional Programs in Higher Education;* (2) Engineering Manpower Commission of Engineers Joint Council publication: (a) *Engineering and Technology Enrollments Fall 1975;* and (3) American Institute of Certified Public Accountant publication: *The Supply of Accounting Graduates and the Demand for Public Accounting Recruits, Spring 1976.*

Table 19.–Earned master's degrees, by field of study: United States, 1964-65 to 1985-86[1]

Year	A. Social sciences					B. Humanities					
	Total social sciences	Social sciences	Psychology	Public affairs and services	Library sciences	Total humanities	Architecture and environmental design	Fine and applied arts	Foreign languages	Communications	Letters
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1964-65	18,696	9,619	2,187	3,679	3,211	14,203	373	4,244	2,690	384	6,512
1965-66	22,541	11,616	2,423	4,586	3,916	17,667	702	5,019	3,393	523	8,030
1966-67	25,919	13,676	2,898	4,856	4,489	20,648	812	5,812	4,017	649	9,358
1967-68	28,598	14,644	3,237	5,552	5,165	22,966	1,021	6,563	4,511	730	10,141
1968-69	32,169	16,514	3,736	5,987	5,932	25,256	1,143	7,413	4,691	785	11,224
1969-70	33,878	16,659	3,953	6,755	6,511	26,305	1,427	7,849	4,803	862	11,364
1970-71	37,200	17,508	4,431	8,260	7,001	27,701	1,705	6,675	4,755	1,856	12,710
1971-72	40,454	18,417	5,289	9,365	7,383	28,975	1,899	7,537	4,618	2,200	12,723
1972-73	42,858	18,341	5,831	10,990	7,696	28,605	2,307	7,254	4,289	2,406	12,349
1973-74	45,591	18,409	6,588	12,460	8,134	29,433	2,702	8,001	3,964	2,640	12,126
1974-75	48,514	18,058	7,066	15,299	8,091	29,762	2,938	8,362	3,807	2,794	11,861
1975-76[2]	52,070	18,940	7,670	16,810	8,650	31,780	3,350	9,000	4,040	3,110	12,280
						Projected[3]					
1976-77	55,350	19,690	8,270	18,290	9,100	33,530	3,770	9,590	4,220	3,430	12,520
1977-78	57,910	20,130	8,760	19,570	9,450	34,910	4,170	10,070	4,380	3,720	12,570
1978-79	59,770	20,260	9,160	20,650	9,700	35,860	4,540	10,450	4,470	3,990	12,410
1979-80	61,350	20,280	9,520	21,650	9,900	36,570	4,880	10,750	4,550	4,240	12,150
1980-81	62,550	20,120	9,850	22,530	10,050	37,080	5,210	11,010	4,610	4,480	11,770
1981-82	63,730	19,980	10,180	23,430	10,140	37,620	5,590	11,270	4,640	4,730	11,390
1982-83	64,300	19,630	10,400	24,120	10,150	37,710	5,870	11,420	4,660	4,940	10,820
1983-84	64,520	19,150	10,590	24,670	10,110	37,690	6,140	11,510	4,660	5,150	10,230
1984-85	63,820	18,410	10,650	24,850	9,910	37,060	6,320	11,450	4,590	5,260	9,440
1985-86	63,130	18,130	10,610	24,840	9,550	36,030	6,440	11,270	4,490	5,360	8,470

Year	C. Natural sciences and miscellaneous fields											
	Total natural sciences and miscellaneous fields	Mathematics and statistics	Computer and information sciences	Engineering	Physical sciences	Biological sciences	Agriculture and natural resourses	Health professions	Accounting	Other business and management	Education	Other[4]
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1964-65	84,253	4,196	146	12,093	4,906	3,600	1,695	2,494	617	7,073	43,323	4,110
1965-66	100,340	4,769	238	13,717	4,977	4,233	2,034	2,833	862	12,280	49,905	4,492
1966-67	111,140	5,278	449	13,986	5,405	4,996	2,119	3,436	1,024	14,086	55,155	5,206
1967-68	125,185	5,527	548	15,247	5,499	5,506	2,234	3,736	1,137	16,964	62,927	5,860
1968-69	136,331	5,713	1,012	15,372	5,895	5,743	2,496	4,065	1,333	18,279	70,231	6,192
1969-70	148,108	5,636	1,459	15,723	5,935	5,800	2,197	4,488	1,083	20,516	78,275	6,996
1970-71	165,608	5,191	1,588	16,443	6,367	5,728	2,457	5,749	1,097	25,447	88,716	6,825
1971-72	182,204	5,198	1,977	16,960	6,287	6,101	2,680	7,207	1,377	29,056	97,880	7,481
1972-73	191,908	5,028	2,113	16,619	6,257	6,263	2,807	8,362	1,621	29,545	105,242	8,051
1973-74	202,009	4,834	2,276	15,379	6,062	6,552	2,928	9,599	1,798	30,955	112,252	9,374
1974-75	214,174	4,327	2,299	15,348	5,807	6,550	3,067	10,692	2,227	34,137	119,778	9,942
1975-76[2]	232,150	4,530	2,500	15,900	6,050	6,980	3,290	11,980	2,540	38,090	129,580	10,710
						Projected[3]						
1976-77	249,120	4,680	2,700	16,460	6,290	7,380	3,500	13,250	2,890	42,230	138,330	11,410
1977-78	263,180	4,770	2,850	16,760	6,420	7,710	3,670	14,420	3,220	45,750	145,620	11,990
1978-79	274,370	4,800	2,980	16,780	6,490	7,920	3,780	15,520	3,500	48,620	151,560	12,420
1979-80	284,080	4,820	3,110	16,750	6,490	8,090	3,880	16,570	3,800	51,210	156,580	12,780
1980-81	292,370	4,810	3,210	16,570	6,480	8,200	3,940	17,610	4,050	53,300	161,110	13,090
1981-82	300,650	4,820	3,330	16,490	6,470	8,330	4,030	18,610	4,320	55,530	165,330	13,390
1982-83	305,990	4,770	3,400	16,280	6,410	8,360	4,070	19,480	4,570	57,150	167,940	13,560
1983-84	309,790	4,680	3,470	15,950	6,320	8,370	4,100	20,290	4,770	58,210	169,970	13,660
1984-85	309,120	4,580	3,480	15,400	6,140	8,240	4,050	20,820	4,910	58,370	169,550	13,580
1985-86	305,840	4,400	3,480	14,780	5,950	8,060	3,990	21,210	5,000	58,050	167,630	13,290

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[1] The breakdown of earned degrees into fields shown in this table differs from the breakdown in 1971 and earlier editions. The present breakdown of earned degrees by field of study is consistent with that shown in *A Taxonomy of Instructional Programs in Higher Education.* To obtain the distribution of degrees by field for the years prior to 1970-71, earned degrees were redistributed as well as possible to conform to the new taxonomy. For a complete listing of the instructional programs included in each field, see appendix A, "Classification of Degrees by field of Study," pages 117-120.

[2] Estimated.

[3] The estimates of earned degrees for most fields for 1975-76 and projections through 1985-86 are based on the assumption that the percentage distribution of degrees by field for each sex will either continue the 1965-65 to 1974-75 trends through 1985-86 or remain at approximately the 1974-75 rate through 1985-86.

For methodological details, see appendix A, table A-2.

[4] Includes home economics, law, military sciences, theology, and interdisciplinary studies.

NOTE.—Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Degree data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Earned Degrees Conferred by Institutions of Higher Education,* 1964-65 through 1974-75, and (2) *A Taxonomy of Instructional Programs in Higher Education.*

Table 20.--Earned doctor's degrees (except first-professional), by field of study: United States, 1964-65 to 1985-86[1]

Year	A. Social sciences					B. Humanities					
	Total social sciences	Social science	Psychology	Public affairs and services	Library sciences	Total humanities	Architecture and environmental design	Fine and applied arts	Foreign languages	Communications	Letters
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1964-65 . .	2,776	1,846	839	79	12	1,848	10	428	376	17	1,017
1965-66 . .	3,129	1,980	1,037	93	19	2,061	12	476	428	15	1,130
1966-67 . .	3,641	2,329	1,190	106	16	2,362	18	504	505	23	1,312
1967-68 . .	4,004	2,640	1,232	110	22	2,779	15	528	610	32	1,594
1968-69 . .	4,599	2,953	1,508	121	17	3,124	32	684	659	22	1,727
1969-70 . .	5,383	3,592	1,620	131	40	3,476	35	734	760	17	1,930
1970-71 . .	5,802	3,803	1,782	178	39	3,999	36	621	781	145	2,416
1971-72 . .	6,389	4,233	1,881	211	64	4,163	50	572	841	111	2,589
1972-73 . .	6,640	4,230	2,089	219	102	4,558	58	616	991	139	2,754
1973-74 . .	6,752	4,126	2,336	230	60	4,385	69	585	923	175	2,633
1974-75 . .	6,992	4,209	2,442	285	56	4,238	69	649	857	165	2,498
1975-76[2] .	7,700	4,730	2,580	320	70	4,270	90	660	850	170	2,500
						Projected[3]					
1976-77 . .	8,420	5,150	2,840	360	70	4,450	100	700	870	180	2,600
1977-78 . .	8,390	4,980	2,940	390	80	4,340	110	690	820	170	2,550
1978-79 . .	8,100	4,640	2,980	410	70	4,150	110	670	760	170	2,440
1979-80 . .	8,130	4,530	3,100	430	70	4,150	110	680	750	170	2,440
1980-81 . .	8,350	4,470	3,330	470	80	4,260	120	710	740	180	2,510
1981-82 . .	8,620	4,420	3,580	530	90	4,460	140	750	750	190	2,630
1982-83 . .	8,890	4,520	3,690	580	100	4,440	150	770	710	190	2,620
1983-84 . .	9,160	4,600	3,840	620	100	4,510	160	790	690	200	2,670
1984-85 . .	9,440	4,680	4,000	660	100	4,590	170	820	670	200	2,730
1985-86 . .	9,470	4,650	4,030	690	100	4,480	170	810	620	200	2,680

	C. Natural sciences and miscellaneous fields											
	Total natural sciences and miscellaneous fields	Mathematics and statistics	Computer and information sciences	Engineering	Physical sciences	Biological sciences	Agriculture and natural resourses	Health professions	Accounting	Other business and management	Education	Other[4]
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1964-65 . . .	11,843	682	6	2,133	2,829	1,928	657	173	32	297	2,682	424
1965-66 . . .	13,047	782	19	2,315	3,045	2,097	716	251	34	368	3,034	386
1966-67 . . .	14,614	832	38	2,619	3,462	2,255	771	250	43	411	3,526	407
1967-68 . . .	16,306	947	36	2,933	3,593	2,784	800	243	33	427	4,076	434
1968-69 . . .	18,465	1,097	64	3,391	3,859	3,051	886	283	40	506	4,793	495
1969-70 . . .	21,007	1,236	107	3,691	4,312	3,289	1,004	357	56	566	5,830	559
1970-71 . . .	22,306	1,199	128	3,638	4,390	3,645	1,086	466	61	749	6,398	546
1971-72 . . .	22,811	1,128	167	3,671	4,103	3,653	971	442	51	851	7,041	733
1972-73 . . .	23,579	1,068	196	3,492	4,006	3,636	1,059	646	83	849	7,314	1,230
1973-74 . . .	22,679	1,031	198	3,312	3,626	3,439	930	578	70	913	7,293	1,289
1974-75 . . .	22,853	975	213	3,108	3,626	3,384	991	618	60	951	7,443	1,484
1975-76[2] . .	23,030	920	230	2,900	3,560	3,560	1,030	780	80	1,010	7,640	1,320
						Projected[3]						
1976-77 . . .	24,130	920	250	2,880	3,510	3,810	1,110	890	90	1,100	8,200	1,370
1977-78 . . .	24,270	880	270	2,790	3,360	3,870	1,160	960	90	1,160	8,350	1,380
1978-79 . . .	23,750	820	280	2,590	3,130	3,800	1,180	1,000	90	1,180	8,330	1,350
1979-80 . . .	23,720	750	290	2,390	2,870	4,040	1,180	1,070	90	1,200	8,510	1,330
1980-81 . . .	24,390	730	300	2,330	2,760	4,060	1,250	1,190	90	1,270	9,040	1,370
1981-82 . . .	25,920	720	340	2,350	2,770	4,260	1,380	1,340	100	1,400	9,810	1,450
1982-83 . . .	26,670	710	370	2,340	2,700	4,340	1,480	1,440	110	1,510	10,170	1,500
1983-84 . . .	27,330	680	390	2,260	2,580	4,390	1,550	1,570	110	1,590	10,680	1,530
1984-85 . . .	27,970	640	410	2,160	2,450	4,400	1,620	1,710	120	1,680	11,210	1,570
1985-86 . . .	28,050	590	430	2,060	2,280	4,380	1,680	1,790	120	1,740	11,400	1,580

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[1] The breakdown of earned degrees into fields shown in this table differs from the breakdown in 1971 and earlier editions. The present breakdown of earned degrees by field of study is consistent with that shown in *A Taxonomy of Instructional Programs in Higher Education.* To obtain the distribution of degrees by field for the back years, the earned degrees were redistributed as well as possible to conform to the new taxonomy. For a

complete listing of the instructional programs included in each field, see appendix A, "Classification of Degrees by Field of Study," pages 117-120.

[2] Estimated.

[3] Data on first-year enrollments for advanced degrees by field of study and by sex were used to make estimates and projections. The time lapse used between first-year enrollment for advanced degrees and doctor's degrees varied from 6 to 10 years (see appendix table B-8 for time lapse used). It was primarily assumed that the percentage that earned degrees in a particular field was of first-year enrollment for advanced degrees 6 to 10 years earlier (depending on time lapse used) would remain constant at the 1974-75 level. This constant was used to obtain unadjusted estimates and projections for the beginning of the projected timespan (through 1980-81 for a 6-year time lapse and through 1984-85 for a 10-year time lapse). For adjusted estimates and projections for these years and projections beyond these years, it was primarily assumed that the percentage that degrees in a particular field was of all doctor's degrees would follow the trend of the 1964-65 to 1974-75 percentages through 1985-86 based on earned degree data, together with the unadjusted estimates and projections beyond 1974-75.

For methodological details, see appendix A, table A-2.

[4] Includes home economics, law, military science, theology, and interdisciplinary studies.

NOTE.—Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Degree data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Earned Degrees Conferred by Institutions of Higher Education,* 1964-65 through 1974-75, (b) *Enrollment for Advanced Degrees,* fall 1961, 1962, and 1963, (c) *Enrollment for Master's and Higher Degrees, Fall 1964,* (d) *Enrollment for Master's and Higher Degrees, Fall 1965,* (e) *Students Enrolled for Advanced Degrees,* fall 1966 through 1975, and (f) *A Taxonomy of Instructional Programs in Higher Education.*

Table 21.--Earned first-professional degrees, by field of study: United States, 1964-65 to 1985-86

Year (1)	Total (2)	Medicine[1] (3)	Dentistry[2] (4)	Other health professions[3] (5)	Law[4] (6)	Theology (7)	Other (8)
1964-65	28,755	7,304	3,108	1,794	11,782	4,767	. . .
1965-66	30,799	7,673	3,247	1,834	13,481	4,564	. . .
1966-67	32,472	7,723	3,341	2,003	15,114	4,291	. . .
1967-68	34,787	7,944	3,422	2,153	16,916	4,352	. . .
1968-69	36,018	8,025	3,408	2,290	17,436	4,859	. . .
1969-70	35,724	8,314	3,718	2,372	15,445	5,875	. . .
1970-71	37,946	8,919	3,745	2,495	17,421	5,055	311
1971-72	43,411	9,253	3,862	2,680	21,764	5,568	284
1972-73	50,018	10,307	4,047	2,871	27,205	5,283	305
1973-74	53,816	11,356	4,440	3,231	29,326	5,041	422
1974-75	55,916	12,447	4,773	3,223	29,296	5,095	1,082
1975-76[5]	58,690	13,700	5,200	3,530	30,500	4,640	1,120
				Projected[6]			
1976-77	60,100	14,000	5,000	3,640	31,370	4,970	1,120
1977-78	63,480	14,700	4,900	3,770	33,010	5,980	1,120
1978-79	64,730	15,100	5,300	3,910	33,500	5,800	1,120
1979-80	65,400	15,400	5,300	4,010	33,700	5,870	1,120
1980-81	67,270	16,500	5,400	4,150	33,900	6,200	1,120
1981-82	68,700	17,200	5,500	4,290	34,200	6,390	1,120
1982-83	69,920	18,000	5,500	4,420	34,400	6,480	1,120
1983-84	70,840	18,500	5,500	4,560	34,600	6,560	1,120
1984-85	71,570	18,800	5,500	4,680	34,800	6,670	1,120
1985-86	71,980	19,000	5,500	4,790	34,900	6,670	1,120

[1] M.D. degrees only.

[2] D.D.S. or D.M.D. degrees.

[3] Includes degrees in chiropody or podiatry, optometry, osteopathy, and veterinary medicine.

[4] LL.B. or J.D. degrees.

[5] Estimated.

[6] First-professional degrees by field were projected by means of the following methods: (1) Medicine, dentistry, and other health professions were projected by the Health Resources Administration, Bureau of Health Manpower. (2) Projected Law degres are based primarily on the assumption that the percentage that law degrees are of first-year law students 3 years earlier, will remain at approximately the 1974-75 level through 1984-85; data on first-year enrollments in law schools were provided by the American Bar Association. (3) Projections of theology degrees for 1975-76 through 1977-78 are based on the assumption that for each sex the percentage that theology degrees are of first-year enrollment for advanced degrees in this field 3 years earlier will remain constant at the 1974-75 level. Projections from 1978-79 through 1985-86 are based on the assumption that for each sex the percentage that first-professional degrees in theology are of all bachelor's degrees 3 years earlier will remain constant at the 1977-78 projected level. (4) It was assumed that "other" first-professional degrees would remain constant at 1,120 degrees through 1985-86.

SOURCE: Degree data and estimates are based on (1) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Earned Degrees Conferred by Institutions of Higher Education,* 1964-65 through 1974-75, (b) *Students Enrolled for Advanced Degrees, fall 1966 through 1974;* and (2) American Bar Association publication: Millard H. Ruud, "That Burgeoning Law School Enrollment slows," *American Bar Association Journal,* 59: 150:153, February 1973.

CHAPTER IV

Instructional Staff

Martin M. Frankel and William C. Sonnenberg

Projections of classroom teachers in regular elementary and secondary schools

Classroom teachers are projected separately for public elementary and secondary, and nonpublic elementary and secondary, schools. For each category, projected pupil-teacher ratios are based primarily on the assumption that the 1965 to 1975 trends will continue through 1985, with lower limits applied. These projected pupil-teacher ratios are then applied to the projected enrollment (table 4) to obtain projections of classroom teachers.

This methodology has been used starting with the 1971 edition. As noted in chapter II, projections of enrollments in regular public elementary and secondary schools have been fairly accurate, so differences between projections of classroom teachers in regular public elementary and secondary schools and actual figures are primarily the result of differences between projected and actual pupil-teacher ratios.

Since the 1971 edition, projections of classroom teachers have been somewhat low, about 1 percent too low for projections 1 year out, 2 percent too low for projections 2 years out, etc. As a result we have repeatedly decreased the lower limits in the trend-line projections of pupil-teacher ratios. We believe that, at the present time, assuming limits lower than 15 pupils per teacher, which are now assumed, would be unreasonable.

Projections of classroom teachers in regular nonpublic elementary and secondary schools are projected in a similar manner. However, both the enrollment and teacher data are very limited and, therefore, these projections should be used with a great deal of caution.

To obtain alternative projections of classroom teachers, which are not shown in this publication, simply apply projections of pupil-teacher ratios based on alternative assumptions to the enrollment projections in table 4.

Projections of instructional staff in institutions of higher education

The projections of full-time-equivalent instructional staff are primarily based on the assumption that, for each type and control category of institutions of higher education, the ratio of full-time-equivalent enrollment (degree-credit and non-degree-credit) to full-time-equivalent instructional staff will follow the 1966-to-1972 trend through 1985. Projections of total full-time and part-time instructional staff for resident courses are computed from the full-time-equivalent instructional staff projections.

As noted in chapter II, projections of enrollments in institutions of higher education are subject to a great deal of variability. Taking this into account and noting that the instructional staff data are quite limited, these projections should be considered only as possible future values of instructional staff based on the assumptions of continuation of past trends in enrollments and in student-staff ratios.

Elementary and Secondary Schools

In fall 1975, there were more than 2.7 million professional persons employed in the public and private elementary and secondary day schools. These professionals included principals, supervisors, librarians, guidance and psychological personnel, and classroom teachers. Of the total number, 90 percent were classroom teachers. The numbers of professional persons employed in the regular public school system were reported to the National Center for Education Statistics by the State departments of education in each of the 50 States and the District of Columbia. The numbers in the regular nonpublic day schools were reported by the individual schools in Office of Education surveys.

Classroom teachers (table 22) and pupil-teacher ratios (table 23)

The number of classroom teachers in public elementary schools increased from 965,000 in 1965 to 1,183,000 in 1975 primarily as a result of decreased pupil-teacher ratios (from 27.6 in 1965 to 21.7 in 1974). Although enrollments in public elementary schools are expected to decrease by nearly 1.8 million students by 1980, corresponding decreases in pupil-teacher ratios are expected to offset the enrollment decreases, resulting in a level of about 1,125,000 teachers through 1980. By 1985 the pupil-teacher ratio is expected to have decreased to 19.4, which, along with increased enrollments, will account for an increase to 1,299 classroom teachers in public elementary schools.

The number of classroom teachers in public secondary schools increased from 748,000 in 1965 to 1,019,000 in 1975 as a result of large enrollment increases (15.5 million in 1965 to 18.7 million in 1974) and significant reductions in the pupil-teacher ratio (from 20.3 in 1965 to 18.8 in 1975). For the next few years, the number of teachers in public secondary schools is expected to increase slightly to over 1 million, as enrollment remains fairly stable and pupil-teacher ratios continue to decrease. However, sharp enrollment drops expected in the late 1970's and early 1980's will be too large to be offset by decreasing pupil-teacher ratios, and, as a result, the number of teachers in public secondary schools for 1985 is expected to be 889,000 (130,000 fewer than in 1975).

The number of classroom teachers in nonpublic elementary schools increased from 147,000 in 1965 to 171,000 in 1975, even though enrollment in these schools has decreased by an estimated 1 million students. The increase in the number of teachers occurred because the large decreases in enrollment were more than offset by a sharp reduction in pupil-teacher ratios–from 33.5 in 1965 to 22.8 in 1975. It is estimated that all of the decreases in enrollment and corresponding reductions in the pupil-teacher ratios occurred in Catholic elementary schools, which made up 89 percent of nonpublic elementary enrollment in 1965 and 65 percent in 1975. It is expected that pupil-teacher ratios will continue to decrease while enrollments remain the same, resulting in an increase in the number of teachers in nonpublic elementary schools from 171,000 in 1975 to 199,000 in 1985.

The number of teachers in nonpublic secondary schools increased from 76,000 in 1965 to 90,000 in 1975 and is expected to be 97,000 in 1985. All of the past and present increases in the number of these teachers is attributable to reductions in pupil-teacher ratios, since enrollment in nonpublic secondary schools has remained at about 1,400,000 students from 1965 to 1975 and is expected to remain at this level through 1985.

Demand for additional public classroom teachers (tables 24, 24a, 24b)

The total demand for additional public elementary and secondary school teachers (not employed in the public schools the previous year) includes those needed to allow for enrollment changes, for lowering pupil-teacher ratios, and for replacement of teachers leaving the profession (turnover). During the period fall 1971 to fall 1975, the cumulative demand for additional public school teachers (including returnees to the profession) was estimated at 778,000. It is expected to decrease to 574,000 from 1976 to 1980, then increase to 702,000 from 1981 to 1985. Therefore, about 1.3 million new teachers or returnees to the profession are expected to be employed by the public schools during the next 10 years, 1976 through 1985.

The projected demand for additional public school teachers is shown in table 24. The number of teachers necessary to take care of enrollment changes and pupil-teacher ratio changes was computed for each year as the difference between the total employed for the current year and the total employed for the previous year. The number for turnover was based on the assumption that 6 percent of the total classroom teachers will leave the profession temporarily or permanently each year.[1]

In table 24a, an 8 percent turnover rate, the historical turnover rate, is used.[2] However, in light of the following assumptions of a changing teacher market, a 6 percent turnover rate seems more reasonable: (1) During the past few years there has been a tight job market for college graduates, thereby reducing the proportion of teachers who leave the profession to take jobs in other fields. (2) The number of teaching openings is decreasing, because of decreasing enrollment, and budgetary pressures have caused most teaching opening to be filled by beginning teachers. For these reasons, the opportunity to re-enter teaching after leaving temporarily is reduced, thereby reducing the proportion of teachers who leave the profession temporarily. (3) Since most teaching openings are being filled by beginning teachers, the proportion of young teachers is increasing, thus reducing the proportion of those who leave the profession because of retirement or death.

Based on an 8-percent turnover rate, the demand for additional teachers during the next 10 years will be 1.7 million, compared with 1.3 million based on a 6-percent turnover rate.

In table 24b, a 4.8-percent turnover rate was used. This is a theoretical floor for the turnover rate, based on estimates of death, retirement, child rearing and bearing, and administrative promotions only. Assuming a 4.8-percent turnover rate, the demand for additional teachers during the next 10 years will be 1.0 million, compared with 1.3 million based on a 6-percent turnover rate and 1.7 million based on an 8-percent turnover rate.

Demand for additional nonpublic classroom teachers (table 25)

The projected demand for additional nonpublic elementary and secondary school teachers is shown in table 25. The numbers for taking care of enrollment changes and pupil-teacher ratio changes were computed in the same manner as for public schools; the number for turnover was based on the assumption that 4 percent of the nonpublic school teachers will leave the profession permanently or temporarily each year. This lower rate (4 percent) was assumed because large numbers of nonpublic school teachers belong to religious orders, where the turnover is presumably small.

Instructional staff (table 26)

Instructional staff in public elementary and secondary schools includes principals, supervisors, librarians, and guidance and psychological personnel, as well as classroom teachers. Instructional staff and classroom teachers are not reported separately for nonpublic schools. Since it is believed that the primary responsibility of most professional personnel employed by the nonpublic schools is classroom teaching, the number of instructional staff shown here is the same as the number of teachers.

Projected instructional staff is shown in table 31. Instructional staff in public elementary and secondary schools increased from 1.9 million in 1965 to less than 2.5 million in 1975 and is expected to remain at about 2.4 million through 1985.

The public school instructional staff projection is based on the assumption that instructional staff as a percentage of classroom teachers will remain constant at the average for 1973 to 1975 through 1985. The average was applied to the public classroom teacher figures shown in table 22 to obtain the projections of public instructional staff. Nonpublic school instructional staff, as previously stated, was assumed to be 100 percent of the classroom teachers shown in table 22.

Institutions of Higher Education

The faculty data for institutions of higher education shown in tables 27 to 29a are on the number of persons by primary positions. Earlier faculty data (1963-64 and earlier) reported the number of positions.

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[1] Joseph Fromkin, *Demand and Supply of Elementary and Secondary Teachers, 1980.*

[2] A. Stafford Metz and Howard L. Fleischman, *Teacher Turnover in Public Schools, Fall 1968 to Fall 1969* (Washington, D.C.: U.S. Government Printing Office, 1974).

Since some positions overlap, with one person filling more than one position, the number of positions is greater than the number of persons. Therefore, the data in tables 27 to 29a are not consistent with faculty data from surveys done prior to 1966.

Instructional staff for resident courses (table 27)

Total full-time and part-time instructional staff for resident courses in all institutions of higher education increased from 412,000 in 1965 to 670,000 in 1975 and is expected to be 696,000 in 1985. These figures include full-time and part-time instructors and above, and full-time and part-time junior instructional staff for instruction in resident courses. (Junior instructional staff includes assistant instructors, teaching fellows, teaching assistant, and laboratory assistants.)

Full-time-equivalent instructional staff for resident courses (table 28)

Full-time-equivalent instructional staff for resident courses in all institutions increased from 316,000 in 1965 to 515,000 in 1975 and is expected to reach 532,000 in 1985. These figures include full-time staff and full-time equivalent of part-time staff for instructor or above and junior instructional staff. In 1975, in all institutions, an estimated 91 percent of the full-time-equivalent instructional members with the rank of instructor or above were employed full time, and an estimated 17 percent of the full-time-equivalent junior instructional staff members were employed full time.

Demand for additional full-time-equivalent instructional staff (tables 29 and 29a)

During the past 5 years, 1971 through 1975, the total demand for additional full-time-equivalent instructional staff was 201,000. The totals are expected to be 207,000 in 1976 through 1980, and 141,000 in 1981 through 1985.

The demand for this additional staff is projected as the total of staff required for increased enrollment and student-staff ratio changes, and for replacement of those who have left the profession either temporarily or permanently. Full-time-equivalent staff required for increased enrollment and student-staff ratio change are computed as the difference between the total number employed in successive years. Replacement requirements are estimated at 6 percent of the total number of full-time-equivalent staff employed in the previous year.

The assumption of a 6-percent replacement rate is based on unpublished data from a 1963 Office of Education study which showed that about 5 percent of the full-time instructors and above in 4-year institutions intended to leave employment in institutions of higher education during the following year. If we estimate an additional 1 percent for mortality, the annual replacement rate is then 6 percent.

Recently, evidence has pointed toward a replacement rate of less than 6 percent. It is believed that 2 percent of the instructional staff either retire or die each year. The remainder of the demand for additional staff is made up of those who leave the profession either temporarily or permanently. Since the percentage of tenured staff has been increasing, it is reasonable to assume that the percentage of staff that leave the profession has been decreasing. Although we have no data at this time indicating a replacement rate that is less than 6 percent, table 29a illustrates the effect that a 4.5 percent replacement rate would have on the demand for additional full-time-equivalent instructional staff.

Based on a 4.5 percent replacement rate, the demand for additional staff over the next 10 years would be 265,000 compared with a demand of 348,000, assuming a 6-percent replacement rate.

Figure 5.--Classroom teachers in regular elementary and secondary day schools, by institutional control and organizational level: United States, fall 1965 to 1985

(Data from table 27)

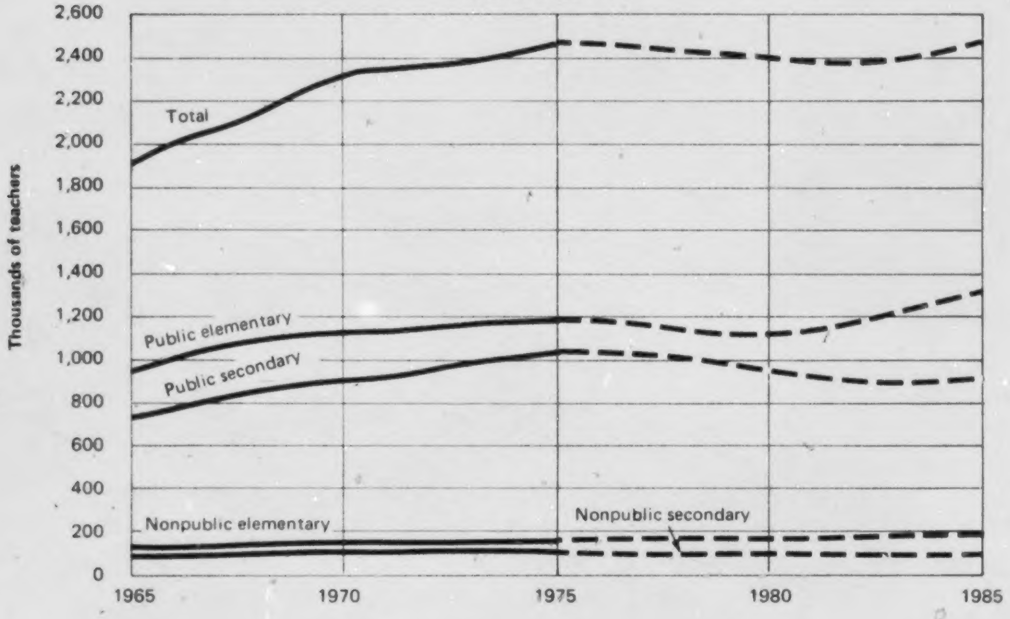

Figure 6.--Instructional staff for resident courses in institutions of higher education, by professional rank: United States and outlying areas, fall 1965 to 1985

(Data from table 32)

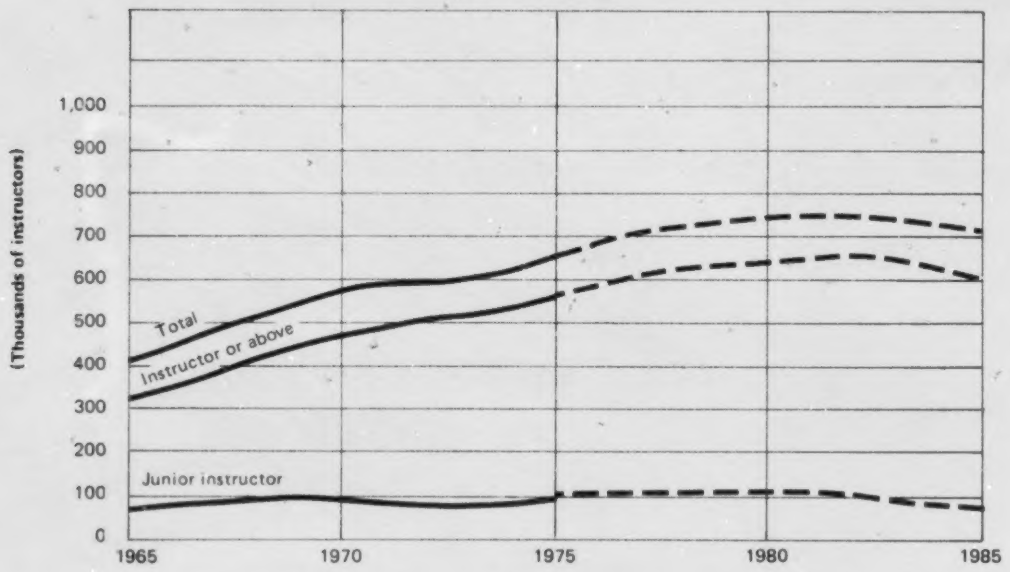

Table 22.--Classroom teachers in regular elementary and secondary day schools, by institutional control and organizational level: United States, fall 1965 to 1985[1]

[In thousands]

Year (fall)	Total public and nonpublic			Public			Nonpublic (estimated)[2]		
	K-12	Elementary	Secondary	K-12	Elementary	Secondary	K-12	Elementary	Secondary
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1965	1,933	1,112	822	1,710	965	746	223	[3] 147	[3] 76
1966	2,012	1,153	859	1,789	1,006	783	223	147	76
1967	2,079	1,188	891	1,855	1,040	815	224	148	76
1968	2,161	1,223	938	1,936	1,076	860	225	[3] 147	[3] 78
1969	2,242	1,259	984	2,013	1,108	906	229	151	78
1970	2,288	1,281	1,007	2,055	1,128	927	233	[3] 153	[3] 80
1971	2,305	1,271	1,034	2,063	[4] 1,111	[4] 952	242	[5] 160	[5] 82
1972	2,356	1,307	1,049	2,103	[4] 1,140	[4] 963	253	[5] 167	[5] 86
1973	2,397	1,323	1,074	2,138	[4] 1,152	[4] 986	259	[5] 171	[5] 88
1974	2,424	1,338	1,086	2,165	[4] 1,167	[4] 998	259	[5] 171	[5] 88
1975	2,463	1,354	1,109	2,203	[4] 1,183	[4] 1,019	261	[5] 171	[3] 90
					Projected[6]				
1976	2,475	1,364	1,111	2,208	1,189	1,019	267	175	92
1977	2,468	1,363	1,105	2,197	1,184	1,013	271	179	92
1978	2,450	1,355	1,095	2,175	1,173	1,002	275	182	93
1979	2,429	1,359	1,070	2,149	1,173	976	280	186	94
1980	2,405	1,362	1,043	2,122	1,174	948	283	188	95
1981	2,397	1,374	1,023	2,111	1,183	928	286	191	95
1982	2,394	1,390	1,004	2,106	1,197	909	288	193	95
1983	2,412	1,415	997	2,120	1,219	901	292	196	96
1984	2,444	1,452	992	2,149	1,254	895	295	198	97
1985	2,484	1,498	986	2,188	1,299	889	296	199	97

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[1] Includes full-time and the full-time equivalent of part-time classroom teachers (in 1974, 99 percent of teachers in the public schools were full time). Prior to 1969, the data include some part-time teachers who were not converted to full-time equivalents. Does not include teachers in independent nursery and kindergarten schools, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] Instructional staff and classroom teachers are not reported separately. All data unless otherwise indicated are estimated.

[3] Reported data from Office of Education surveys.

[4] Estimated. See appendix A, "Estimation Methods," sec. 4.

[5] Estimates based on revised nonpublic enrollment (table 4). These revised estimates of nonpublic classroom teachers differ from figures shown in 1975 and earlier editions.

[6] The projection of teachers in both public and nonpublic schools depends upon the projection of enrollments (table 4) and upon the projection of pupil-teacher ratios (table 23).

For further methodological details, see appendix A, table A-3.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Classroom teacher data and estimates are based on (1) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Statistics of Public Schools*, fall 1965 through 1975, (b) *Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69*, (c) *Statistics of Nonpublic Elementary and Secondary Schools, 1965-66*, and (2) National Education Association publications: Research Reports, *Estimation of School Statistics*, 1972-73, 1973-74, and 1974-75.

Table 23.--Pupil-teacher ratios in regular elementary and secondary day schools, by institutional control and organizational level: United States, fall 1965 to 1985[1]

Year (fall) (1)	Public Elementary (2)	Public Secondary (3)	Nonpublic (estimated)[2] Elementary (4)	Nonpublic (estimated)[2] Secondary (5)
1965	27.6	20.8	[3]33.5	[3]18.1
1966	26.9	20.3	32.3	16.1
1967	26.3	20.3	31.1	18.1
1968	25.4	20.4	[3]29.8	[3]17.3
1969	24.8	20.0	27.9	17.1
1970	24.4	19.8	[3]26.5	[3]16.4
1971	[4]24.9	[4]19.3	25.1	[5]16.2
1972	[4]24.0	[4]19.1	23.9	[5]15.6
1973	[4]22.9	[4]19.3	23.1	[5]15.5
1974	[4]22.6	[4]18.7	22.9	[5]15.7
1975	[4]21.7	[4]18.8	22.8	[5]15.5
		Projected[6]		
1976	21.4	18.6	22.3	15.3
1977	21.1	18.5	21.8	15.2
1978	20.9	18.3	21.4	15.0
1979	20.6	18.2	21.0	14.9
1980	20.4	18.1	20.7	14.8
1981	20.2	17.9	20.4	14.7
1982	20.0	17.8	20.2	14.7
1983	19.8	17.7	19.9	14.6
1984	19.6	17.6	19.7	14.5
1985	19.4	17.5	19.6	14.5

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[1] Includes full-time and the full-time equivalent of part-time classroom teachers (in 1974, 99 percent of teachers in the public schools were full time). Prior to 1969, the data include some part-time teachers who were not converted to full-time equivalents. Does not include teachers in independent nursery and kindergarten schools, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] Instructional staff and classroom teachers are not reported separately. All data unless otherwise indicated are estimated.

[3] Reported data from Office of Education surveys.

[4] Estimated. See appendix A, "Estimation Methods," sec. 4.

[5] Estimates based on revised nonpublic enrollment (table 4). These revised estimates of nonpublic classroom teachers differ from figures shown in 1975 and earlier editions.

[6] The projections of pupil-teacher ratios are based on the assumption that the ratio of enrollment to the number of teachers will follow the 1965-1975 trend to 1985.

Decreases in the pupil-teacher ratios in public elementary and secondary schools due to the Elementary and Secondary Education Act of 1965 are included in the trend projections.

For further methodological details, see appendix A, table A-3.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Classroom teacher data and estimates are based on (1) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Statistics of Public Schools,* fall 1965 through 1975, (b) *Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69,* (c) *Statistics of Nonpublic Elementary and Secondary Schools, 1965-66,* and (2) National Education Association publications: Research Reports, *Estimation of School Statistics,* 1972-73, 1973-74, and 1974-75.

Table 24.--Estimated demand for classroom teachers in regular public elementary and secondary day schools: United States, fall 1970 to 1985[1]

[In thousands]

Year (fall) (1)	Total teacher demand (2)	Demand for additional certificated teachers[2]: Total (3)	For enrollment changes (4)	For pupil-teacher ratio changes (5)	For teacher turnover (6)
1970	2,055	...	...	...	...
1971	2,063	131	9	–1	123
1972	2,103	164	–12	52	124
1973	2,138	161	–7	42	126
1974	2,165	155	–19	46	128
1975	2,203	167	–4	41	130
1971-1975	...	778	–33	180	631
			Projected[3]		
1976	2,208	138	–22	28	132
1977	2,197	121	–33	22	132
1978	2,175	109	–44	22	131
1979	2,149	104	–48	22	130
1980	2,122	102	–44	17	129
1976-1980	...	574	–191	111	654
1981	2,111	116	–32	21	127
1982	2,106	122	–22	17	127
1983	2,120	140	–4	18	126
1984	2,149	156	11	18	127
1985	2,188	168	21	18	129
1981-1985	...	702	–26	92	636

[1] Includes full-time and the full-time equivalent of part-time classroom teachers (in 1974, 99 percent of teachers in the public schools were full-time). Does not include teachers in independent nurseries and kindergartens, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] The estimates and projections of demand for additional certificated teachers were based on the following assumptions: (1) For changes in pupil-teacher ratios, the number of additional teachers needed is the total teacher demand in a given year less the estimated total teacher demand in the same year had the pupil-teacher ratio in the previous year remained constant. (2) For enrollment changes, the number of additional teachers needed is the total needed for both enrollment changes and pupil-teacher ratio changes less the number needed for pupil-teacher ratio changes alone; the number of additional teachers needed for both enrollment changes and pupil-teacher ratio changes is the total teacher demand in a given year less the total teacher demand in the previous year. (3) For teacher turnover, the number of additional teachers needed to replace those leaving the profession either temporarily or permanently will be 6 percent of the total employed in the previous year; the 6-percent separation rate is based on a 1974 study by Joseph Froomkin entitled, *Demand and Supply of Elementary and Secondary Teachers, 1980.*

The projected demand makes no allowance for replacement of teachers who hold substandard certificates (less than 2 percent of employed teachers in 1972).

[3] The projection of classroom teachers in public schools by organizational level and institutional control is based on the assumption that the pupil-teacher ratio will follow the 1965-75 trend to 1985.

For further methodological details, see appendix A, table A-3.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publication: *Statistics of Public Schools,* fall 1970 through 1975.

Table 24a.--Estimated demand for classroom teachers in regular public elementary and secondary day schools, based on high turnover assumption: United States, fall 1970 to 1985[1]

[In thousands]

Year (fall) (1)	Total teacher demand (2)	Demand for additional certificated teachers[2] Total (3)	For enrollment changes (4)	For pupil-teacher ratio changes (5)	For teacher turnover (6)
1970	2,055	...	...	...	...
1971	2,063	172	9	–1	164
1972	2,103	205	–12	52	165
1973	2,138	203	–7	42	168
1974	2,165	198	–19	46	171
1975	2,203	210	–4	41	173
1971-1975	...	988	–33	180	841
			Projected[3]		
1976	2,208	182	–22	28	176
1977	2,197	166	–33	22	177
1978	2,175	154	–44	22	176
1979	2,149	148	–48	22	174
1980	2,122	145	–44	17	172
1976-1980	...	795	–191	111	875
1981	2,111	159	–32	21	170
1982	2,106	164	–22	17	169
1983	2,120	182	–4	18	168
1984	2,149	199	11	18	170
1985	2,188	211	21	18	172
1981-1985	...	915	–26	92	849

[1] Includes full-time and the full-time equivalent of part-time classroom teachers (in 1974, 99 percent of teachers in the public schools were full-time). Does not include teachers in independent nurseries and kindergartens, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] The estimates and projections of demand for additional certificated teachers were based on the following assumptions: (1) For changes in pupil-teacher ratios, the number of additional teachers needed is the total teacher demand in a given year less the estimated total teacher demand in the same year had the pupil-teacher ratio in the previous year remained constant. (2) For enrollment changes, the number of additional teachers needed is the total needed for both enrollment changes and pupil-teacher ratio changes less the number needed for pupil-teacher ratio changes alone; the number of additional teachers needed for both enrollment changes and pupil-teacher ratio changes is the total teacher demand in a given year less the total teacher demand in the previous year. (3) For teacher turnover, the number of additional teachers needed to replace those leaving the profession either temporarily or permanently will be 8 percent of the total employed in the previous year; the 8-percent separation rate is based on the Office of Education study *Teacher Turnover in Public Schools, Fall 1968 to Fall 1969.*

The projected demand makes no allowance for replacement of teachers who hold substandard certificates (less than 2 percent of employed teachers in 1972).

[3] The projection of classroom teachers in public schools by organizational level and institutional control is based on the assumption that the pupil-teacher ratio will follow the 1965-75 trend to 1985.

For further methodological details, see appendix A, table A-3.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publication: *Statistics of Public Schools,* fall 1970 through 1975.

Table 24b.–Estimated demand for classroom teachers in regular public elementary and secondary day school, based on low turnover assumption: United States, fall 1970 to 1985[1]

[In thousands]

Year (fall)	Total teacher demand	Demand for additional certificated teachers[2]			
		Total	For enrollment changes	For pupil-teacher ratio changes	For teacher turnover
(1)	(2)	(3)	(4)	(5)	(6)
1970	2,055	...	...	...	...
1971	2,063	107	9	–1	99
1972	2,103	139	–12	52	99
1973	2,138	136	–7	42	101
1974	2,165	130	–19	46	103
1975	2,203	141	–4	41	104
1971-1975	...	653	–33	180	506
			Projected[3]		
1976	2,208	112	–22	28	106
1977	2,197	95	–33	22	106
1978	2,175	83	–44	22	105
1979	2,149	78	–48	22	104
1980	2,122	76	–44	17	103
1976-1980	...	444	–191	111	524
1981	2,111	91	–32	21	102
1982	2,106	96	–22	17	101
1983	2,120	115	–4	18	101
1984	2,149	131	11	18	102
1985	2,188	142	21	18	103
1981-1985	...	575	–26	92	509

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[1] Includes full-time and the full-time equivalent of part-time classroom teachers (in 1974, 99 percent of teachers in the public schools were full-time). Does not include teachers in independent nurseries and kindergartens, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] The estimates and projections of demand for additional certificated teachers were based on the following assumptions: (1) For changes in pupil-teacher ratios, the number of additional teachers needed is the total teacher demand in a given year less the estimated total teacher demand in the same year had the pupil-teacher ratio in the previous year remained constant. (2) For enrollment changes, the number of additional teachers needed is the total needed for both enrollment changes and pupil-teacher ratio changes less the number needed for pupil-teacher ratio changes alone; the number of additional teachers needed for both enrollment changes and pupil-teacher ratio changes is the total teacher demand in a given year less the total teacher demand in the previous year. (3) For teacher turnover, the number of additional teachers needed to replace those leaving the profession either temporarily or permanently will be 4.8 percent of the total employed in the previous year; the 4.8 percent separation rate is based on estimates of death, retirement, child rearing and bearing, and administrative promotions only. Other reasons for leaving the teaching profession, not included in this table, but included in tables 29 and 29a, are taking jobs outside of education, and leaving for other personal reasons.

The projected demand makes no allowance for replacement of teachers who hold substandard certificates (less than 2 percent of employed teachers in 1972).

[3] The projection of classroom teachers in public schools by organizational level and institutional control is based on the assumption that the pupil-teacher ratio will follow the 1965-75 trend to 1985.

For further methodological details, see appendix A, table A-3.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publication: *Statistics of Public Schools*, fall 1970 through 1975.

Table 25.--Estimated demand for classroom teachers in regular nonpublic elementary and secondary day schools: United States, fall 1970 to 1985

[In thousands]

Year (fall)	Total teacher demand	Demand for additional certificated teachers[1]			
		Total	For enrollment changes	For pupil-teacher ratio changes	For teacher turnover
(1)	(2)	(3)	(4)	(5)	(6)
1970	233	...	...	...	...
1971	242	18	0	9	9
1972	253	21	0	11	10
1973	259	16	0	6	10
1974	259	10	0	0	10
1975	261	12	0	2	10
1971-1975	...	77	0	28	49
			Projected		
1976	267	16	0	6	10
1977	271	15	0	4	11
1978	275	15	0	4	11
1979	280	16	0	5	11
1980	283	14	0	3	11
1976-1980	...	76	0	22	54
1981	286	14	0	3	11
1982	288	13	0	2	11
1983	292	16	0	4	12
1984	295	15	0	3	12
1985	296	13	0	1	12
1981-1985	...	71	0	13	58

[1] The estimates and projections of demand for additional certificated teachers were based on the following assumptions: (1) For changes in pupil-teacher ratios, the number of additional teachers needed is the total teacher demand in a given year less the estimated total teacher demand in the same year had the pupil-teacher ratio in the previous year remained constant. (2) For enrollment changes, the number of additional teachers needed is the total needed for both enrollment changes and pupil-teacher ratio changes less the number needed for pupil-teacher ratio changes alone; the number of additional teachers needed for both enrollment changes and pupil-teacher ratio changes is the total teacher demand in a given year less the total teacher demand in the previous year. (3) For teacher turnover, the number of additional teachers needed to replace those leaving the nonpublic schools either temporarily or permanently is assumed to be 4 percent of the total employed in the previous year.

For further methodological details, see appendix A, table A-3.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Statistics of Nonpublic Elementary and Secondary Schools, 1970-71,* and (2) *Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69.*

Table 26.--Estimated instructional staff in regular elementary and secondary day schools, by institutional control: United States, fall 1965 to 1985[1]

[In thousands]

Year (fall) (1)	Total (2)	Public schools (3)	Nonpublic schools[2] (4)
1965	2,108	1,885	223
1966	2,207	1,984	223
1967	2,295	2071	224
1968	2,389	2,164	225
1969	2,482	2,253	229
1970	2,529	2,296	233
1971	2,530	2,288	[3] 242
1972	2,592	2,339	[3] 253
1973	2,638	2,379	[3] 259
1974	2,682	2,423	[3] 259
1975	2,722	2,461	[3] 261
		Projected[4]	
1976	2,731	2,464	267
1977	2,723	2,452	271
1978	2,702	2,427	275
1979	2,678	2,398	280
1980	2,651	2,368	283
1981	2,642	2,356	286
1982	2,638	2,350	288
1983	2,658	2,366	292
1984	2,693	2,398	295
1985	2,738	2,442	296

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[1] Instructional staff includes principals, supervisors, librarians, and guidance and psychological personnel, as well as full-time and the full-time equivalent of part-time classroom teachers. (In 1974, 99 percent of classroom teachers were full time.) Prior to 1969, the data include some part-time teachers who were not converted to full-time equivalents. Does not include instructional staff in independent nursery and kindergarten schools, residential schools for exceptional children, subcollegiate departments of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] Instructional staff and classroom teachers are not reported separately. All data are wholly or partially estimated.

[3] Estimates based on revised nonpublic enrollment (table 4). These revised estimates of nonpublic instructional staff differ from figures shown in 1975 and earlier editions.

[4] Projections of instructional staff in public schools are based on the assumption that the ratio of instructional staff to classroom teachers will remain constant at the average of the 1973-75 levels through 1985.

For further methodological details, see appendix A, table A-3.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Instructional staff data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Statistics of Public Schools*, fall 1971 through 1975, (2) *Statistics of State School Systems*, biennial circulars 1964-65 through 1969-70, (3) *Statistics of Nonpublic Elementary and Secondary Schools, 1970-71*, (4) *Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69*, and (5) *Statistics of Nonpublic Elementary and Secondary Schools, 1965-66*.

Table 27.--Estimated full-time and part-time instructional staff for instruction in resident courses in all institutions of higher education, by professional rank: United States, fall 1965 to 1985

[In thousands]

Year (fall)	Total	Instructor or above			Junior instructor		
		Total	Full-time	Part-time	Total	Full-time	Part-time
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965[1]	412	340	248	92	72	14	58
1966	445	362	278	84	83	16	67
1967	484	390	299	91	94	13	81
1968[1]	523	428	332	96	95	15	80
1969[1]	546	450	350	100	97	15	82
1970	573	474	369	104	101	14	87
1971[1]	590	492	379	113	97	10	88
1972	590	500	380	120	90	6	84
1973[2]	599	509	386	123	90	7	83
1974[2]	622	529	400	129	93	7	86
1975[2]	670	572	430	142	98	7	91
				Projected[3]			
1976	687	586	441	145	101	7	94
1977	704	603	451	152	101	7	94
1978	714	615	460	155	99	8	91
1979	722	623	465	158	99	8	91
1980	730	630	468	162	100	9	91
1981	732	632	470	162	100	9	91
1982	732	633	471	162	99	8	91
1983	724	628	463	165	96	8	88
1984	712	617	455	162	95	7	88
1985	696	603	444	159	93	7	86

[1] Estimated. See appendix A, "Estimation Methods," secs. 5a - 5g.

[2] Estimated.

[3] The estimates and projections of full-time and part-time instructional staff are based on the projections of full-time equivalent instructional staff in table 28 and the following assumption: For each type and control category of institutions of higher education and for junior and senior instructional staff separately, the percentage that the full-time equivalent of part-time instructional staff was of part-time instructional staff in 1972 will remain constant through 1985.

For methodological details, see appendix A, table A-3.

NOTE.—Because of rounding, details may not add to totals.

SOURCES: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publication: (1) *Number and Characteristics of Employees in Institutions of Higher Education,* fall 1966 and 1967, (2) *Teaching and Research Staff by Academic Fields, Fall 1968,* (3) unpublished data from survey on employees in institutions of higher education, fall 1970, and (4) Numbers of Employees in Institutions of Higher Education, Fall 1972.

Table 28.--Estimated full-time-equivalent instructional staff for resident courses in all institutions of higher education, by professional rank: United States, fall 1965 to 1985[1]

[In thousands]

Year (fall)	Estimated total full-time equivalent	Instructor or above			Junior instructor		
		Total	Full time	Full-time equivalent of part time	Total	Full time	Full-time equivalent of part time
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965[1]	316	279	248	31	37	14	23
1966	351	308	278	29	43	16	27
1967	378	331	299	32	46	13	33
1968[1]	412	364	332	32	48	15	33
1969[1]	430	383	350	33	49	15	33
1970	451	402	369	33	50	14	36
1971[1]	458	414	379	35	44	10	34
1972	455	417	380	37	38	6	32
1973[2]	462	424	386	38	38	7	31
1974[2]	479	440	400	40	39	7	32
1975[2]	515	474	430	44	41	7	34
				Projected[3]			
1976	528	486	441	45	42	7	35
1977	540	498	451	47	42	7	35
1978	550	508	460	48	42	8	34
1979	556	514	465	49	42	8	34
1980	561	518	468	50	43	9	34
1981	563	520	470	50	43	9	34
1982	563	521	471	50	42	8	34
1983	556	514	463	51	42	8	34
1984	545	505	455	50	40	7	33
1985	532	493	444	49	39	7	32

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[1] Estimated. See appendix A, "Estimation Methods," secs. 5a - 5g.

[2] Estimated.

[3] The estimates and projections of full-time instructional staff and the full-time equivalent of part-time instructional staff are based on the following assumptions for each type and control category of institutions of higher education: (a) The ratio of full-time-equivalent enrollment (degree-credit and nondegree-credit) to full-time-equivalent instructional staff will follow the 1966 to 1972 trend through 1985. (b) The percentage that full-time-equivalent senior instructional staff was of total full-time-equivalent instructional staff will remain constant at the 1972 level through 1985. (c) For junior and senior staff separately, the percentage that full-time instructional staff was of full-time-equivalent instructional staff in 1972 will remain constant through 1985.

For methodological details, see appendix A, table A-3.

NOTE.—Because of rounding, details may not add to totals.

SOURCES: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Numbers and Characteristics of Employees in Institutions of Higher Education,* fall 1966 and 1967, (2) *Teaching and Research Staff by Academic Fields, Fall 1968,* (3) unpublished data from survey on employees in institutions of higher education, fall 1970, and (4) *Numbers of Employees in Institutions of Higher Education, Fall 1972.*

Table 29.–Estimated demand for full-time-equivalent instructional staff in institutions of higher education: United States, fall 1970 to 1985

[In thousands]

Year (fall)	Full-time-equivalent instructional staff[1]	Additional full-time-equivalent instructional staff needed		
		Total	For increased enrollment and changes of student-staff ratio	For replacement
(1)	(2)	(3)	(4)	(5)
1970	451	...	...	...
1971	458	34	7	27
1972	455	24	–3	27
1973	462	34	7	27
1974	479	45	17	28
1975	515	65	36	29
1971-1975	...	202	64	138
		Projected[2]		
1976	528	44	13	31
1977	540	44	12	32
1978	550	42	10	32
1979	556	39	6	33
1980	561	38	5	33
1976-1980	...	207	46	161
1981	563	36	2	34
1982	563	34	0	34
1983	556	27	–7	34
1984	545	22	–11	33
1985	532	20	–13	33
1981-1985	...	139	–29	168

[1] The estimates and projections of additional full-time-equivalent professional staff for increased enrollment and for reduction of the student-staff ratio were computed as the difference between the total full-time-equivalent professional staff employed in 2 successive years.

The projection of additional full-time-equivalent professional staff for replacement of those leaving the profession, temporarily or permanently, was estimated at 6 percent of the total full-time-equivalent professional staff employed in the previous year.

For methodological details, see appendix A, table A-3.

[2] For method of estimating and projecting full-time-equivalent instructional staff, see table 28, footnote 3.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Numbers and Characteristics of Employees in Institutions of Higher Education*, fall 1966 and 1967, (2) *Teaching and Research Staff by Academic Fields, Fall 1968*, (3) unpublished data from survey on employees in institutions of higher education, fall 1970, and (4) *Numbers of Employees in Institutions of Higher Education, Fall 1972.*

Table 29a.–Estimated demand for full-time-equivalent instructional staff in institutions of higher education, based on a low alternative replacement rate: United States, fall 1970 to 1985

[In thousands]

Year (fall)	Full-time-equivalent instructional staff[1]	Additional full-time-equivalent instructional staff needed		
		Total	For increased enrollment and changes of student-staff ratio	For replacement
(1)	(2)	(3)	(4)	(5)
1970	451	...	...	...
1971	458	27	7	20
1972	455	18	–3	21
1973	462	27	7	20
1974	479	38	17	21
1975	515	58	36	22
1971-1975	...	168	64	104
			Projected[2]	
1976	528	36	13	23
1977	540	36	12	24
1978	550	34	10	24
1979	556	31	6	25
1980	561	30	5	25
1976-1980	...	167	46	121
1981	563	27	2	25
1982	563	25	0	25
1983	556	18	–7	25
1984	545	14	–11	25
1985	532	12	–13	25
1981-1985	...	96	–29	125

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[1] The estimates and projections of additional full-time-equivalent professional staff for increased enrollment and for reduction of the student-staff ratio were computed as the difference between the total full-time-equivalent professional staff employed in 2 successive years.

The projection of additional full-time-equivalent professional staff for replacement of those leaving the profession, temporarily or permanently, was estimated at 4.5 percent of the total full-time-equivalent professional staff employed in the previous year.

For methodological details, see appendix A, table A-3.

[2] For method of estimating and projecting full-time-equivalent instructional staff, see table 28, footnote 3.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Numbers and Characteristics of Employees in Institutions of Higher Education,* fall 1966 and 1967, (2) *Teaching and Research Staff by Academic Fields, Fall 1968,* (3) unpublished data from survey on employees in institutions of higher education, fall 1970, and (4) *Numbers of Employees in Institutions of Higher Education, Fall 1972.*

CHAPTER V

Expenditures of Educational Institutions

Forrest W. Harrison and C. George Lind

Projections of Current Expenditures in Regular Elementary and Secondary Schools

For regular public elementary and secondary schools, projections of current expenditures are obtained by applying projections of current expenditures per pupil in average daily attendance (CE/ADA) in constant dollars to projections of average daily attendance (92 percent of enrollment projections in table 3). This method has been used with considerable success since the 1972 edition.

Fall data on current expenditures are estimated by the individual States. Final data are available biennially for the school years beginning with odd numbers (1973-74, 1975-76, etc.). However, the biennial data are usually not available for several years; for example, 1973-74 data were not available when the projections in this publication were made.

Despite the lack of a complete and current data base, the projections of CE/ADA have been surprisingly accurate. In fact, they have tended to be more accurate than the State estimates upon which they are partially dependent.

Since this projection method has been used only for the four prior editions, we can evaluate projections only at the beginning of the projection period. However, it seems reasonable to assume that accuracy will decrease as the length of time between the observed data and the projection increases.

No attempt is made to project current expenditures in nonpublic elementary and secondary schools, for which expenditure data are not available. Instead, this publication presents estimates and projections of what the current expenditure in constant dollars would be to educate the nonpublic students at the CE/ADA for public schools and the pupil-teacher ratios of nonpublic schools.

Projections of Current Expenditures in Institutions of Higher Education

Projections of current expenditures for student education per full-time-equivalent student are applied to projections of full-time-equivalent enrollment (table 9) to obtain projections of current expenditure for student education (about two-thirds of total current expenditures). More than half the remainder of current expenditures is based on a percentage of projections of current expenditures for student education.

As noted in chapter II, projections of enrollments in institutions of higher education are subject to a great deal of variability. Therefore, projections of current expenditures which are to a large extent dependent on enrollment projections should be considered only as possible future values of current expenditures based on past trends in enrollment and in current expenditures for student education per full-time-equivalent student.

Explanations and Definitions

The main tables in this chapter pertain only to expenditures of regular public and nonpublic elementary and secondary schools and institutions of higher education in the 50 States and the District of Columbia.

Data on "other" and "special" institutions are not included, except for the references to "other" schools in the discussion below and in table 30.

"Other" institutions include elementary and secondary residential schools for exceptional children (public and nonpublic), Federal schools for Indians (public), and federally operated elementary and secondary schools on military posts (public). In 1975-76, estimated expenditures were about $200 million for public and $100 million for nonpublic "other" schools. Almost all "other" schools, including the nonpublic, were nonprofitmaking institutions.

"Special" institutions include schools such as trade schools or business colleges not in the regular school or college framework. Expenditure data are not available for "special" schools, but it is estimated they spend $1.9 billion per year. The U.S. Bureau of the Census estimates that approximately 1.4 million persons aged 5 through 34 years were enrolled in "special" schools in October, 1975.[1] If an average expenditure per student of about $1,400 is assumed, the total expenditures for these schools would be about $1.9 billion. Almost all "special" schools are nonpublic, profitmaking institutions.

Regular institutions include public and most nonprofitmaking, nonpublic elementary and secondary schools (kindergarten through grade 12) plus the institutions of higher education offering degree-credit courses, and a small number of technical and professional schools. Most of these schools and colleges are oriented toward regular academic programs, but some are primarily technical training institutions or offer both academic and vocational courses.

Total expenditures include all funds expended for capital outlay, current expenditures, and interest. They exclude repayment of debt and transfers of funds that would result in duplication.

Capital outlay includes expenditures which result in additions to plant assets; this includes expenditures by public school building authorities but excludes lease or rental payments made to these agencies. Borrowed money is included; a large percentage of the funds expended for capital outlay was received from loans. In 1973-74, an estimated 84 percent of the capital outlay for public elementary and secondary schools was for land and buildings, the remaining 16 percent for new buses and other equipment. About 75 percent of the capital outlay by institutions of higher education during 1974-75 was for land and buildings, the remaining 25 percent was for equipment.

Current expenditures include any expenditures except those for repayment of debt and capital outlay. Interest is generally excluded from the current expenditures shown here because it is treated separately. The largest current expense item is salaries of instructional staff, accounting for about 60 percent of current expenditures. The remaining 40 percent goes for transportation, maintenance, etc.

Interest includes all funds expended for the use of money. Most of the interest shown here was expended on account of long-term debt that was incurred for constructing buildings.

Expenditures by Source of Funds

Regular and "Other" Schools (table 30)

Although no attempt was made to project amounts of funds from the various sources to be expended by educational institutions, estimates are shown by source for the past years, 1965-66 through 1973-74. To do this, estimates for "other" schools were added to the total expenditures shown in table 32 for the appropriate years. The resulting total expenditures for regular and "other" schools were then broken down by source of funds by first adjusting receipts to equate them with expenditures and then assuming continuation of the 1965-66 through 1973-74 trend in the amount of receipts from each source. Receipts and expenditures were equated mainly by including loans and excluding the receipts used for repayment of loans.

Total expenditures are defined as the expenditure of all money from both loans and grants and exclude only the funds used for reducing debt and transfers that result in duplication. Expenditures from Federal, State, and local sources are defined as institutional expenditures of all grants (but not loans) of funds

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[1] U.S. Department of Commerce, Bureau of the Census, *Current Population Reports, School Enrollment: October, 1975,* Series P-20, No. 294, 1976.

Table 30.--Estimated expenditures by regular and "other" educational institutions, by source of funds: United States, 1965-66 to 1976-77[1]

Source of funds by control and level (1)	1965-66 (2)	1967-68 (3)	1969-70 (4)	1971-72 (5)	1973-74 (6)	1974-75 (7)	1975-76 (8)	1976-77 (9)
	AMOUNT, billions of current dollars							
All levels:								
Total, public and nonpublic	$45.2	$57.2	$70.4	$83.2	$98.4	$107.6	$120.1	$131.1
Federal	5.0	6.8	7.5	9.2	10.2	12.2	13.4	13.8
State	13.1	16.9	22.2	25.8	33.2	37.0	41.7	45.9
Local	15.1	18.6	22.6	26.7	29.8	31.2	34.3	37.4
All other	12.0	14.9	18.1	21.5	25.2	27.2	30.7	34.0
Total, public	35.3	45.5	56.8	67.4	80.0	87.6	97.7	106.4
Federal	3.6	5.1	5.8	7.4	8.3	9.9	10.8	11.1
State	13.0	16.8	22.1	25.6	32.9	36.7	41.4	45.5
Local	15.1	18.6	22.5	26.6	29.7	31.1	34.2	37.3
All other	3.6	5.0	6.4	7.8	9.1	9.9	11.3	12.5
Total, nonpublic	9.9	11.7	13.6	15.8	18.4	20.0	22.4	24.7
Federal	1.4	1.7	1.7	1.8	1.9	2.3	2.6	2.7
State	.1	.1	.1	.2	.3	.3	.3	.4
Local	(2)	(2)	.1	.1	.1	.1	.1	.1
All other	8.4	9.9	11.7	13.7	16.1	17.3	19.4	21.5
Elementary and secondary schools:								
Total, public and nonpublic	30.0	37.3	45.7	54.0	64.1	68.7	75.3	81.9
Federal	2.1	3.0	3.4	4.6	5.1	6.0	6.4	6.4
State	9.6	12.1	15.8	18.0	23.5	25.5	28.3	31.0
Local	14.7	18.0	21.7	25.6	28.4	29.7	32.5	35.4
All other	3.6	4.2	4.8	5.8	7.1	7.5	8.1	9.1
Total, public[3]	26.5	33.2	41.0	48.3	57.1	61.3	67.3	72.9
Federal	2.1	3.0	3.4	4.6	5.1	6.0	6.4	6.4
State	9.6	12.1	15.8	18.0	23.5	25.5	28.3	31.0
Local	14.7	18.0	21.7	25.6	28.4	29.7	32.5	35.4
All other	.1	.1	.1	.1	.1	.1	.1	.1
Total, nonpublic	3.5	4.1	4.7	5.7	7.0	7.4	8.0	9.0
Federal	...	...	...	...	...	...	...	...
State	...	...	...	...	...	...	...	...
Local	...	...	...	...	...	...	...	...
All other	3.5	4.1	4.7	5.7	7.0	7.4	8.0	9.0
Institutions of higher education:								
Total, public and nonpublic	15.2	19.9	24.7	29.2	34.3	38.9	44.8	49.2
Federal	2.9	3.8	4.1	4.6	5.1	6.2	7.0	7.4
State	3.5	4.8	6.4	7.8	9.7	11.5	13.4	14.9
Local	.4	.6	.9	1.1	1.4	1.5	1.8	2.0
All other	8.4	10.7	13.3	15.7	18.1	19.7	22.6	24.9
Total, public[3]	8.8	12.3	15.8	19.1	22.9	26.3	30.4	33.5
Federal	1.5	2.1	2.4	2.8	3.2	3.9	4.4	4.7
State	3.4	4.7	6.3	7.6	9.4	11.2	13.1	14.5
Local	.4	.6	.8	1.0	1.3	1.4	1.7	1.9
All other	3.5	4.9	6.3	7.7	9.0	9.8	11.2	12.4
Total, nonpublic[3]	6.4	7.6	8.9	10.1	11.4	12.6	14.4	15.7
Federal	1.4	1.7	1.7	1.8	1.9	2.3	2.6	2.7
State	.1	.1	.1	.2	.3	.3	.3	.4
Local	(2)	(2)	.1	.1	.1	.1	.1	.1
All other	4.9	5.8	7.0	8.0	9.1	9.9	11.4	12.5

See footnotes at end of table.

Table 30.–Estimated expenditures by regular and "other" educational institutions, by source of funds: United States, 1965-66 to 1976-77[1] –Continued

Source of funds by control and level (1)	1965-66 (2)	1967-68 (3)	1969-70 (4)	1971-72 (5)	1973-74 (6)	1974-75 (7)	1975-76 (8)	1976-77 (9)
				Percent				
All levels:								
Total, public and nonpublic	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal	11.1	11.9	10.7	11.1	10.4	11.3	11.1	10.5
State	29.0	29.5	31.5	31.0	33.7	34.4	34.7	35.0
Local	33.4	32.5	32.1	32.1	30.3	29.0	28.6	28.5
All other	26.5	26.1	25.7	25.8	25.6	25.3	25.6	26.0
Total, public	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal	10.2	11.2	10.2	11.0	10.4	11.3	11.0	10.4
State	36.8	36.9	38.9	38.0	41.1	41.9	42.4	42.8
Local	42.8	40.9	39.6	39.4	37.1	35.5	35.0	35.1
All other	10.2	11.0	11.3	11.6	11.4	11.3	11.6	11.7
Total, nonpublic	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal	14.1	14.5	12.5	11.4	10.3	11.5	11.6	10.9
State	1.0	.9	.7	1.3	1.6	1.5	1.3	1.6
Local	([4])	([4])	.7	.6	.6	.5	.5	.4
All other	84.9	84.6	86.1	86.7	87.5	86.5	86.6	87.1
Elementary and secondary schools:								
Total, public and nonpublic	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal	7.0	8.0	7.4	8.5	7.9	8.7	8.5	7.8
State	32.0	32.4	34.6	33.3	36.7	37.1	37.6	37.9
Local	49.0	48.3	47.5	47.4	44.3	43.2	43.2	43.2
All other	12.0	11.3	10.5	10.8	11.1	11.0	10.7	11.1
Total, public	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal	8.0	9.0	8.2	9.5	8.9	9.8	9.5	8.8
State	36.3	36.5	38.6	37.2	41.2	41.6	42.1	42.5
Local	55.3	54.2	52.9	53.1	49.7	48.4	48.2	48.6
All other	.4	.3	.3	.2	.2	.2	.2	.1
Total, nonpublic	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal	...	...	...	...	...	...	...	...
State	...	...	...	...	...	...	...	...
Local	...	...	...	...	...	...	...	...
All other	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Institutions of higher education:								
Total, public and nonpublic	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal	19.1	19.1	16.6	15.7	14.9	15.9	15.6	15.0
State	23.0	24.1	25.9	26.7	28.3	29.6	29.9	30.3
Local	2.6	3.0	3.6	3.8	4.1	3.9	4.0	4.1
All other	55.3	53.8	53.9	53.8	52.7	50.6	50.5	50.6
Total, public	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal	17.6	17.3	14.9	14.7	14.1	15.0	14.5	14.0
State	38.4	38.2	39.7	39.7	41.1	42.5	42.9	43.3
Local	4.1	4.6	5.1	5.4	5.5	5.4	5.6	5.8
All other	39.9	39.9	40.3	40.2	39.3	37.1	37.0	36.9
Total, nonpublic	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal	22.1	22.1	18.8	18.3	17.1	18.5	17.8	17.0
State	1.5	1.3	1.6	2.0	2.5	2.1	2.2	2.3
Local	.1	.3	.7	.5	.6	.7	.7	.8
All other	76.3	76.3	78.9	79.2	79.8	78.7	79.3	79.9

[1] In addition to regular schools (shown in table 36), these figures include "other" elementary and secondary schools such as residential schools for exceptional children, Federal schools for Indians, and federally operated elementary and secondary schools on military posts. The annual expenditures of "other" elementary and secondary schools were stimated as follows: Public, $200 million annually, 1965-66 to 1976-77; nonpublic, $100 million annually, 1965-66 to 1976-77.

[2] Less than $50 million.

[3] Total expenditures distributed according to the trend of receipts shown in appendix B, table B-11,. See text for more complete explanation.

[4] Less than 0.05 percent.

NOTE.–Data are for 50 States and the District of Columbia for all years.

SOURCES: Data for the table above were based on (1) statistics shown in U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Statistics of State School Systems,* biennially, 1965-66 through 1973-74, (b) *Statistics of Public Schools,* annually, fall 1972 through fall 1975, (c) *Financial Statistics of Higher Education,* annually 1965-66 through 1974-75; and (2) unpublished data in the National Center for Education Statistics and the National Education Association.

received from these sources. Expenditures from all other sources include all funds received by the institutions that were not received as grants from Federal, State, and local governments. Loans to institutions of higher education from any source are included under "all other." (It is estimated that in 1975-76, $33 million in Federal loans to institutions of higher education was included in the "all other" category shown here.)

Since the foregoing definitions are designed to show sources of funds through the eyes of educational institutions, the Federal figures shown in the following table are different from those shown in appendix B, table B-11, on Federal funds for education. The three main reasons are as follows:

1. Different items are included. For example, the table on Federal funds in appendix B shows grants and loans to individuals, which would appear in institutional accounts here as receipts from tuition or auxiliary services; or the money may be spent for board and room outside the institution and not be a receipt of the institution from any source.

2. The same items may be handled differently. For example, the table on Federal funds shows only basic research for institutions of higher education; the institutions include some applied research grants from the Federal Government.

3. The table on Federal funds generally shows obligated funds; the institutional figures show expenditures.

Total Expenditures

Regular Institutions (table 31)

Total annual expenditures of regular educational institutions (in 1975-76 dollars) increased from $80.8 billion in 1965-66 to $119.8 billion in 1975-76 and are expected to be $161 billion in 1985-86. The expenditure increases are caused chiefly by the increasing costs of the many items, such as school facilities and salaries of teachers, that are necessary for providing education. The projected total expenditures are shown in table 31. They are based mainly on the assumption that the 1965-66 to 1975-76 trend will continue through 1985-86.

Regular Public Elementary and Secondary Schools (table 1, 3)

Current Expenditures

Annual current expenditures for public elementary and secondary schools (in 1975-76 dollars) increased from $37.6 billion in 1965-66 to $59.1 billion in 1975-76, an increase of 57 percent. They are expected to increase 39 percent to $82.3 billion by 1985-86.

Increasing enrollment (in the past), together with increasing expenditures per pupil, have accounted for increasing current expenditures. Even without increases in enrollment, current expenditures are expected to increase though at a slower rate in constant dollars for practically all of the major items included in current expenditures, such as administration, instruction, operation and maintenance of plant, fixed charges, and other school services and programs. Annual current expenditures per pupil (in 1975-76 dollars) increased from $933 in 1965-66 to $1,388 in 1975-76 and are expected to increase to $2,130 by 1985-86.

Projected current expenditures for public elementary and secondary schools are shown in table 33. They were projected as follows:

1. Current expenditures per pupil in average daily attendance (ADA) for the base years 1965-66 through 1975-76 were converted to 1975-76 dollars on the basis of the Consumer Price Index prepared by the Bureau of Labor Statistics, U.S. Department of Labor. Monthly index numbers were averaged on a July-June basis to correspond to the school years.

2. The current expenditures per pupil for the years 1965-66 through 1975-76 were used in deriving a formula (by least squares) for projecting trend figures for 1976-77 through 1985-86. This formula was $Y' = \$5{,}000/[1+e^{(1.492-0.057t)}]$; ($t$ = time in years, $t = 1$ in 1965-66).

3. Average daily attendance was calculated for 1976-77 through 1985-86 by assuming that the ratio of

average daily attendance to projected fall enrollment in kindergarten through grade 12 will remain constant at 0.92 through 1985-86, based on the projection of the trend of the past 11 years.

4. Total current expenditures allocated to public elementary and secondary school pupil costs (1975-76 dollars) were projected to 1985-86 by multiplying the current expenditures per pupil, as projected in step 2, by the corresponding average daily attendance projected in step 3. These figures exclude expenditures for summer schools, adult education, and community colleges operated by school districts.

5. Total current expenditures for all programs operated by school districts–including summer schools, adult education, and community colleges–were projected to 1985-86 by assuming that current expenditures for all programs will remain constant at the rate of 10 percent of current expenditures for programs allocated for public elementary and secondary school pupil costs.

6. Current expenditures per pupil allocated by public elementary and secondary pupil costs were projected to 1985-86 by assuming that the trend of 1965-66 through 1975-76 will continue through 1985-86.

7. Total current expenditures allocated to pupil costs were projected by multiplying the current expenditures per pupil, as projected in step 6, by the corresponding average daily attendance projected in step 3.

8. Total current expenditures for all programs operated by school districts were projected by multiplying the figures in step 7 by 104 percent.

Salaries of Classroom Teachers (tables 34, 22)

A large part of current expenditures for public elementary and secondary schools is for salaries of classroom teachers (amounting to 50 percent in 1973-74). Estimated total expenditures for these salaries (in 1975-76 dollars) increased from $19.3 billion in 1965-66 to $27.4 billion in 1975-76 and are expected to be $31.2 billion in 1985-86. These increases are due to changes in the numbers of classroom teachers and to higher average annual salaries.

The average annual salary of classroom teachers (in 1975-76 dollars) increased from $11,290 in 1965-66 to an estimated $12,448 in 1975-76 and is expected to be $14,250 in 1985-86. During the past 10 years, 1965-1976, the average annual salary has been increasing about $126 per year in 1975-76 dollars. The projected figure for 1985-86 ($14,250) is based on the assumption that the 1965-66 to 1975-76 trend will continue through 1985-86.

Projected total and average annual salares of classroom teachers in public elementary and secondary schools are shown in table 34. The procedure was as follows:

The average annual salary (Y) was projected as a continuation of the 1965-66 to 1975-76 trend: $Y' = \$10,468 + 180(t)$; ($t$ = time in years, $t = 1$ in 1965-66).

Total expenditures for salaries of classroom teachers were then computed as the product of the average annual salary and the total number of classroom teachers. (The total number of classroom teachers was taken from table 22.)

Capital Outlay (table 35)

Capital outlay (in 1975-76 dollars) by regular public elementary and secondary schools, including the expenditures of State and local school building authorities, was $39.5 billion for the 5-year period, 1966-67 through 1970-71, and $29.1 billion for the following 5-year period, 1971-72 through 1975-76. It is expected to be $26.5 billion for 1976-77 through 1980-81 and $22.3 billion for 1981-82 through 1985-86.

Projected expenditures for capital outlay are shown in table 35. They are not projections of need but are simply projections of the capital outlay expected in the light of the 1965-66 through 1975-76 trend.

The basic data and projections are shown in table 35.

It should be noted that not all the capital outlay shown here represents construction. It was estimated that, in 1973-74, 16 percent of capital outlay was for equipment and 84 percent for land and buildings.

A sharp decrease is expected in the number of rooms to be completed, on account of enrollment increases; however, school buildings will continue to be constructed for other reasons, including: (1)

replacements (abandonments), (2) migration factors (including school district reorganization), and (3) reduction of crowded and unsatisfactory rooms.

Interest Expenditures (table 36)

Annual expenditures (in 1975-76 dollars) for interest by public elementary and secondary schools increased from $1.4 billion in 1965-66 to $2 billion in 1975-76 and are expected to be $2.8 billion in 1985-86. Projected interest is shown in table 36. The projections are based on the assumption that the 1965-66 to 1975-76 trend will continue through 1985-86. Although capital outlay is expected to level off or decline in the next decade, this assumption seems reasonable because interest payments continue 20 years or more after construction, resulting in debt being incurred at a greater rate than it is being eliminated. The trend formula for projecting interest (Y) in 1975-76 dollars was as follows: $Y' = \$10,000/1 + e^{(1.786-0.040t)}]$); (t = time in years, t = 1 in 1965-66).

Nonpublic Elementary and Secondary Schools (tables 31, 32)

Expenditure data for nonpublic elementary and secondary schools comparable with those for public schools are nonexistent. It is extremely difficult to arrive at a universally accepted method for determining the value of donated services for nonpublic schools, even if data on actual expenditures were collected. These donated services make up a substantial part of nonpublic school resources, especially in the elementary and secondary schools operated by religious orders. In 1970-71, nearly 70 percent of the over 216,000 nonpublic school teachers belonged to religious orders of the Roman Catholic Church. Also, it might be argued that many of the remaining nonpublic school teachers, whose salaries generally run lower than those in public schools, really donated part of their services.

Although it is difficult to arrive at national estimates of nonpublic school expenditures that everyone will accept, the substantial contribution of nonpublic elementary and secondary schools cannot be ignored when total expenditures for education are being considered. Therefore, illustrative estimates of nonpublic elementary and secondary school expenditures were developed rather arbitrarily and are shown in table 31. They are based on the assumption that the cost per teacher (including donated facilities and services) in nonpublic schools is the same as in the public schools. The formula was as follows: $Y = XP$ (X = ratio of nonpublic to public school teachers and P = public school expenditures). The ratio of nonpublic to public school teachers was around 12 percent during the last 10 years and is expected to be around 11 percent during the next 10 years. The numbers upon which these ratios were computed are shown in table 22.

Some previous estimates published by the National Center for Education Statistics were based on the assumption that per-pupil costs in nonpublic schools were the same as in public schools. Since the average pupil-teacher ratio is higher in nonpublic than in public schools, the previous estimates were higher than those shown here. Both types of estimates are, in a sense, hypothetical; one shows what it would cost to educate nonpublic elementary and secondary school children if they were enrolled in public schools and if the public school pupil-teacher ratio were maintained; the other (tables 31 and 32) shows the cost if the pupil-teacher ratio were maintained at the nonpublic school level. Neither of these hypotheses allows for including nonpublic pupils in public schools where capacity is already available.

Institutions of Higher Education

Current Expenditures (tables 27, 37)

Annual current expenditures, excluding transfers, of institutions of higher education (in 1975-76 dollars) increased from $20.8 billion in 1965-66 to $39.7 in 1975-76. They are expected to reach $54.5 billion by 1985-86. The projected data are based largely upon projections of enrollment and upon the trend of increasing costs per student expressed in constant 1975-76 dollars. The result is an estimated constant-dollar increase of $18.9 billion over the past 10 years, 1965-75 (table 31). When expressed in terms of current expenditures per full-time-equivalent student, the data in constant 1975-76 dollars are as follows:

Item	Per full-time-equivalent student in 1975-76 dollars		
	1965-66	1975-76	1985-86
Current expenditures per full-time-equivalent student	$4,458	$4,684	$5,710
Publicly controlled institutions	3,780	4,115	5,031
Nonpublicly controlled institutions	5,790	6,578	8,546

A change in the reporting of data beginning in 1974-75 has necessitated a realignment (largely nomenclature) of various components of current-fund expenditures. Tables 31 and 32 are footnoted to indicate the previous headings. Student education now encompasses instruction, academic support (including libraries), student services, and institutional support. Expenditures for student education were projected by use of the trend of annual expenditures per full-time-equivalent student over the 10-year base period and the projected enrollment of such students (see table 37). When expressed in terms of expenditures for student education per full-time-equivalent student, the data in constant 1975-76 dollars are as follows:

Item	Per full-time-equivalent students in 1975-76 dollars		
	1965-66	1975-76	1985-86
Expenditures for student education per full-time-equivalent student	$2,363	$3,017	$3,933
Publicly controlled	2,107	2,790	3,635
Nonpublicly controlled	2,865	3,774	5,177

Expenditures for hospitals and independent operations by institutions of higher education, in billions of 1975-76 dollars, do not appear to indicate a reliable trend, or viable relation to enrollment, and are held at the 1976-77 level. The independent operations segment is largely federally funded research and development center expenditures:

Item	Billions of 975-76 dollars		
	1965-66	1975-76	1985-86
Expenditures for hospitals and independent operations	$ 1.8	$ 3.8	$ 4.0
Publicly controlled	.9	2.1	2.2
Privately controlled	.9	1.7	1.8

The projection of expenditures for research was made without regard to relationship of other components, with the exception that the amount estimated as a portion of hospitals and independent operations prior to 1968-69 was deleted from the base data. The expenditures for research, in billions of 1975-76 dollars, do not appear to indicate a reliable trend, or viable relation to enrollment, and are held at the 1976-77 level:

Item	Billions of 1975-76 dollars		
	1965-66	1975-76	1985-86
Expenditures for research	$ 3.0	$ 3.3	$ 3.3
Publicly controlled institutions	1.5	2.2	2.3
Nonpublicly controlled institutions	1.5	1.1	1.0

The projections of public service expenditures, auxiliary enterprises, and scholarships and fellowships were done on the basis of percentage relationship to student education expenditures and held at the 1976-77 percentages for the remainder of the projection. This, in effect, allowed a projection held to currently valid relationships:

Item	Percentage of student education 1965-66	1975-76	1985-86
Expenditures for public service:			
Publicly controlled institutions	16.22	7.82	6.92
Nonpublicly controlled institutions	6.55	5.05	5.02
Expenditures for auxiliary enterprises:			
Publicly controlled institutions	30.93	15.03	13.17
Nonpublicly controlled institutions	37.38	22.68	21.01
Expenditures for scholarships and fellowships:			
Publicly controlled institutions	4.08	4.89	4.99
Nonpublicly controlled institutions	10.77	11.73	11.90

Capital outlay (tables 31 and 39)

Annual capital outlay of institutions of higher education (in 1975-76 dollars) has remained virtually static since reaching its lowest point of the base-period decade in 1972-73 ($5.1 billion 1975-76 constant dollars) after declining from $8.0 billion (in 1975-76 constant dollars) in 1966-67 and 1967-68. This decline and levelling off has occurred during a period when full-time-equivalent enrollment had increased by 54 percent.

In view of a projected average annual increase of only 1.3 percent in enrollment over the projected 10-year period and the performance of capital outlay during the base period, the projection of capital outlay is held to $5.1 billion (in constant 1975-76 dollars) per year.

Figure 7.--Total expenditures (1975-76 dollars) by regular elementary and secondary day schools: United States, 1965-66 to 1985-86

(Data from table 31)

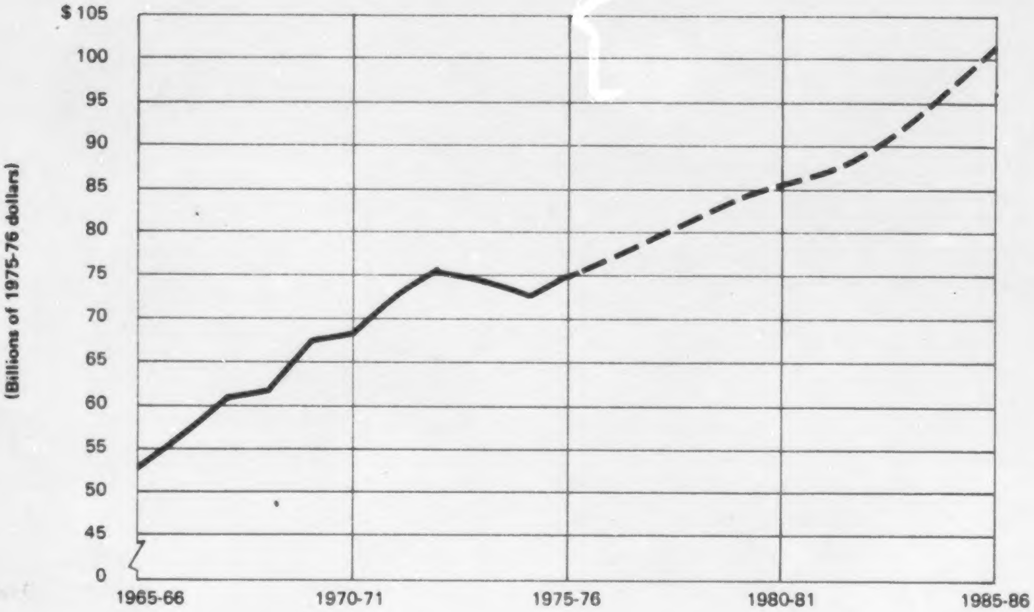

Figure 8.--Total expenditures (1975-76 dollars) by institutions of higher education: United States, 1965-66 to 1985-86

(Data from table 32)

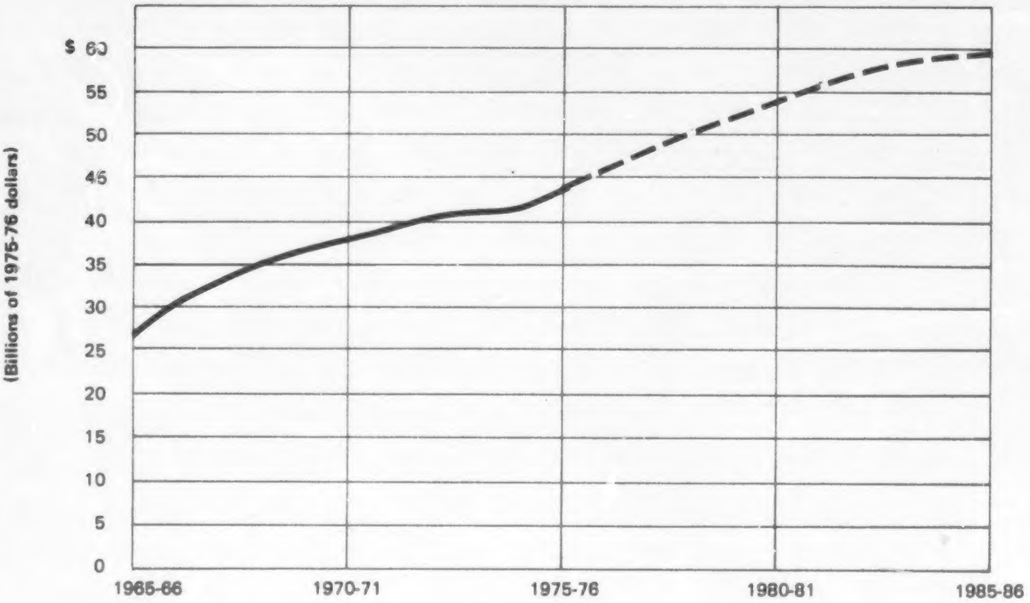

Table 31.--Expenditures (1975-76 dollars) of regular educational institutions, by instructional level and institutional control: United States, 1965-66 to 1985-86

[In billions of 1975-76 dollars]

Year and control	Total (all levels)	Elementary and secondary schools[1] (nonpublic school expenditures estimated on the basis of expenditures per teacher in public schools)				Institutions of higher education[2]		
		Total	Current expenditures[3]	Capital outlay[4]	Interest[5]	Total	Current expenditures[6]	Capital outlay[7]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1965-66:								
Total	$80.8	$53.1	$42.5	$9.0	$1.6	$27.7	$20.8	$6.9
Public	63.1	47.0	37.6	8.0	1.4	16.1	11.7	4.4
Nonpublic	17.7	6.1	4.9	1.0	.2	11.6	9.1	2.5
1966-67:								
Total	87.4	56.5	45.6	9.1	1.8	30.9	22.9	8.0
Public	68.7	50.2	40.5	8.1	1.6	18.5	13.3	5.2
Nonpublic	18.7	6.3	5.1	1.0	.2	12.4	9.6	2.8
1967-68:								
Total	95.4	61.6	50.6	9.2	1.8	33.8	25.8	8.0
Public	75.8	54.9	45.1	8.2	1.6	20.9	15.7	5.2
Nonpublic	19.6	6.7	5.5	1.0	.2	12.9	10.1	2.8
1968-69:								
Total	97.3	62.2	51.2	9.2	1.8	35.1	27.9	7.2
Public	78.2	55.7	45.9	8.2	1.6	22.5	17.2	5.3
Nonpublic	19.1	6.5	5.3	1.0	.2	12.6	10.7	1.9
1969-70:								
Total	105.1	68.1	57.6	8.6	1.9	37.0	29.8	7.2
Public	84.8	61.1	51.7	7.7	1.7	23.7	18.6	5.1
Nonpublic	20.3	7.0	5.9	.9	.2	13.3	11.2	2.1
1970-71:								
Total	106.9	68.5	58.4	8.1	2.0	38.4	31.8	6.6
Public	86.7	61.6	52.5	7.3	1.8	25.1	20.3	4.8
Nonpublic	20.2	6.9	5.9	.8	.2	13.3	11.5	1.8
1971-72:								
Total	113.3	73.8	64.9	6.8	2.1	39.5	33.6	5.9
Public	92.0	66.1	58.1	6.1	1.9	25.9	21.6	4.3
Nonpublic	21.3	7.7	6.8	.7	.2	13.6	12.0	1.6
1972-73:								
Total	116.1	75.7	67.8	5.7	2.2	40.4	35.3	5.1
Public	94.3	67.6	60.5	5.1	2.0	26.7	22.9	3.8
Nonpublic	21.8	8.1	7.3	.6	.2	13.7	12.4	1.3
1973-74:								
Total	115.3	74.6	66.0	6.4	2.2	40.7	35.6	5.1
Public	93.9	66.6	58.9	5.7	2.0	27.3	23.5	3.8
Nonpublic	21.4	8.0	7.1	.7	.2	13.4	12.1	1.3
1974-75:								
Total	115.2	73.5	64.5	6.9	2.1	41.7	36.5	5.2
Public	93.9	65.7	57.6	6.2	1.9	28.2	24.4	3.8
Nonpublic	21.3	7.8	6.9	.7	.2	13.5	12.1	1.4
1975-76:								
Total	119.8	75.0	66.1	6.7	2.2	44.8	39.7	5.1
Public	97.5	67.1	59.1	6.0	2.0	30.4	26.8	3.6
Nonpublic	22.3	7.9	7.0	.7	.2	14.4	12.9	1.5
				Projected				
1976-77:								
Total	123.7	77.1	68.5	6.4	2.2	46.6	41.5	5.1
Public	100.5	68.8	61.1	5.7	2.0	31.7	28.2	3.5
Nonpublic	23.2	8.3	7.4	.7	.2	14.9	13.3	1.6

See footnotes at end of table.

Table 31.–Expenditures (1975-76 dollars) of regular educational institutions, by instructional level and institutional control: United States, 1965-66 to 1985-86–Continued

[In billions of 1975-76 dollars]

Year and control	Total (all levels)	Elementary and secondary schools[1] (nonpublic school expenditures estimated on the basis of expenditures per teacher in public schools)				Institutions of higher education[2]		
		Total	Current expendi-itures[3]	Capital outlay[4]	Interest[5]	Total	Current expend-itures[6]	Capital outlay[7]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
				Projected				
1977-78:								
Total	$ 128.3	$ 79.5	$ 70.9	$ 6.2	$ 2.4	$ 48.8	$ 43.7	$ 5.1
Public	104.1	70.7	63.1	5.5	2.1	33.4	29.9	3.5
Nonpublic	24.2	8.8	7.8	.7	.3	15.4	13.8	1.6
1978-79:								
Total	132.3	81.4	72.9	6.0	2.5	50.9	45.8	5.1
Public	107.2	72.2	64.7	5.3	2.2	35.0	31.5	3.5
Nonpublic	25.1	9.2	8.2	.7	.3	15.9	14.3	1.6
1979-80:								
Total	136.1	83.2	74.8	5.8	2.6	52.9	47.8	5.1
Public	110.2	73.6	66.2	5.1	2.3	36.6	33.1	3.5
Nonpublic	25.9	9.6	8.6	.7	.3	16.3	14.7	1.6
1980-81:								
Total	139.7	85.0	76.7	5.6	2.7	54.7	49.6	5.1
Public	113.1	75.0	67.7	4.9	2.4	38.1	34.6	3.5
Nonpublic	26.6	10.0	9.0	.7	.3	16.6	15.0	1.6
1981-82:								
Total	143.6	87.2	79.1	5.4	2.7	56.4	51.3	5.1
Public	116.3	76.9	69.7	4.8	2.4	39.4	35.9	3.5
Nonpublic	27.3	10.3	9.4	.6	.3	17.0	15.4	1.6
1982-83:								
Total	147.7	89.9	81.9	5.2	2.8	57.8	52.7	5.1
Public	119.7	79.1	72.0	4.6	2.5	40.6	37.1	3.5
Nonpublic	28.0	10.8	9.9	.6	.3	17.2	15.6	1.6
1983-84:								
Total	152.1	93.3	85.2	5.1	3.0	58.8	53.7	5.1
Public	123.4	82.0	74.9	4.5	2.6	41.4	37.9	3.5
Nonpublic	28.7	11.3	10.3	.6	.4	17.4	15.8	1.6
1984-85:								
Total	156.3	97.0	89.0	4.9	3.1	59.3	54.2	5.1
Public	127.2	85.3	78.3	4.3	2.7	41.9	38.4	3.5
Nonpublic	29.1	11.7	10.7	.6	.4	17.4	15.8	1.6
1985-86:								
Total	161.0	101.4	93.4	4.8	3.2	59.6	54.5	5.1
Public	131.5	89.3	82.3	4.2	2.8	42.2	38.7	3.5
Nonpublic	29.5	12.1	11.1	.6	.4	17.4	15.8	1.6

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[1] Excludes expenditures for residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, and federally operated schools on Federal installations. See table 30 on expenditures by source of funds for data on these schools. All nonpublic elementary and secondary school expenditures shown here are estimated on the basis of expenditures per teacher in public elementary and secondary schools.

[2] Includes expenditures for subcollegiate departments of institutions of higher education, estimated at $95 million in 1975-76. Excludes expenditures for interest paid from plant funds. (An estimated $400 million was expended for total interest in 1975-76.)

[3] Includes current expenditures of public elementary and secondary school systems for community services, summer schools, community colleges, and adult education.

[4] Includes capital outlay of State and local school building authorities.

[5] Interest for nonpublic schools is based on interest for public schools.

[6] Includes expenditures for interest from current funds. Excludes transfers from current funds.

[7] The estimated annual capital outlay data shown here include estimated expenditures for replacement and rehabilitation.

NOTE.–Data are for 50 States and the District of Columbia.

SOURCES: Data are a summary of tables 33 through 39, each of which indicates sources of data.

Table 32.--Expenditures (current dollars) of regular educational institutions, by instructional level and institutional control: United States, 1965-66 to 1976-77

[In billions of current dollars]

Year and control	Total (all levels)	Elementary and secondary schools[1] (nonpublic school expenditures estimated on the basis of expenditures per teacher in public schools)				Institutions of higher education[2]		
		Total	Current expenditures[3]	Capital outlay[4]	Interest[5]	Total	Current expenditures[6]	Capital outlay[7]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1965-66:								
Total	$44.9	$29.7	$24.5	$4.3	$ .9	$15.2	$11.9	$3.3
Public	35.1	26.3	21.7	3.8	.8	8.8	6.7	2.1
Nonpublic	9.8	3.4	2.8	.5	.1	6.4	5.2	1.2
1966-67:								
Total	49.3	31.8	26.3	4.5	1.0	17.5	13.6	3.9
Public	38.7	28.3	23.4	4.0	.9	10.4	7.9	2.5
Nonpublic	10.6	3.5	2.9	.5	.1	7.1	5.7	1.4
1967-68:								
Total	56.9	37.0	31.1	4.8	1.1	19.9	15.8	4.1
Public	45.3	33.0	27.7	4.3	1.0	12.3	9.6	2.7
Nonpublic	11.6	4.0	3.4	.5	.1	7.6	6.2	1.4
1968-69:								
Total	61.6	39.6	33.3	5.2	1.1	22.0	17.9	4.1
Public	49.5	35.5	29.8	4.7	1.0	14.0	11.0	3.0
Nonpublic	12.1	4.1	3.5	.5	.1	8.0	6.9	1.1
1969-70:								
Total	70.1	45.4	38.9	5.2	1.3	24.7	20.3	4.4
Public	56.6	40.8	34.9	4.7	1.2	15.8	12.7	3.1
Nonpublic	13.5	4.6	4.0	.5	.1	8.9	7.6	1.3
1970-71:								
Total	76.4	49.3	42.2	5.7	1.4	27.1	22.8	4.3
Public	62.0	44.3	37.9	5.1	1.3	17.7	14.6	3.1
Nonpublic	14.4	5.0	4.3	.6	.1	9.4	8.2	1.2
1971-72:								
Total	82.9	53.7	47.1	5.0	1.6	29.2	24.9	4.3
Public	67.2	48.1	42.2	4.5	1.4	19.1	16.0	3.1
Nonpublic	15.7	5.6	4.9	.5	.2	10.1	8.9	1.2
1972-73:								
Total	89.4	58.0	51.6	4.6	1.8	31.4	27.3	4.1
Public	72.6	51.9	46.2	4.1	1.6	20.7	17.7	3.0
Nonpublic	16.8	6.1	5.4	.5	.2	10.7	9.6	1.1
1973-74:								
Total	98.1	63.8	56.3	5.6	1.9	34.3	29.9	4.4
Public	79.8	56.9	50.2	5.0	1.7	22.9	19.7	3.2
Nonpublic	18.3	6.9	6.1	.6	.2	11.4	10.2	1.2
1974-75:								
Total	107.3	68.4	60.1	6.4	1.9	38.9	34.1	4.8
Public	87.4	61.1	53.7	5.7	1.7	26.3	22.8	3.5
Nonpublic	19.9	7.3	6.4	.7	.2	12.6	11.3	1.3
1975-76:								
Total	119.8	75.0	66.1	6.7	2.2	44.8	39.7	5.1
Public	97.5	67.1	59.1	6.0	2.0	30.4	26.8	3.6
Nonpublic	22.3	7.9	7.0	.7	.2	14.4	12.9	1.5
					Projected			
1976-77:								
Total	130.8	81.6	72.1	7.1	2.4	49.2	43.7	5.5
Public	106.2	72.7	64.3	6.3	2.1	33.5	29.7	3.8
Nonpublic	24.6	8.9	7.8	.8	.3	15.7	14.0	1.7

See footnotes on page 72.

[1] Excludes expenditures for residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, and federally operated schools on Federal installations. See table 30 on expenditures by source of funds for data on these schools. All nonpublic elementary and secondary school expenditures shown here are estimated on the basis of expenditures per teacher in public elementary and secondary schools.

[2] Includes expenditures for subcollegiate departments of institutions of higher education, estimated at $95 million in 1975-76. Excludes expenditures for interest paid from plant funds. (An estimated $400 million was expended for total interest in 1975-76.)

[3] Includes current expenditures of public elementary and secondary school systems for community services, summer schools, community colleges, and adult education.

[4] Includes capital outlay of State and local school building authorities.

[5] Interest for nonpublic schools is based on interest for public schools.

[6] Includes expenditures for interest from current funds. Excludes transfers from current funds.

[7] The estimated annual capital outlay data shown here include estimated expenditures for replacement and rehabilitation.

NOTE.—Data are for 50 States and the District of Columbia.

SOURCES: Data are a summary of tables 33 through 39, each of which indicates sources of data.

Table 33.--Current expenditures of public school systems: United States, 1965-66 to 1985-86

Year	Average daily attendance (in thousands)	Allocated to pupil costs[1]				All programs[2]	
		Per pupil in average daily attendance		Total (in billions)		Total (in billions)	
		Current dollars	1975-76 dollars	Current dollars	1975-76 dollars	Current dollars	1975-76 dollars
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965-66	39,154	$ 537.35	$ 933	$ 21.1	$ 36.5	$ 21.7	$ 37.6
1966-67[3]	40,962	569.00	959	22.6	39.3	23.4	40.5
1967-68	40,828	658.26	1,073	26.9	43.8	27.7	45.1
1968-69[3]	41.157	696.00	1,083	28.6	44.6	29.8	45.9
1969-70	41.934	815.98	1,198	34.2	50.2	34.9	51.7
1970-71[3]	42,428	860.00	1,201	36.5	51.0	37.9	52.5
1971-72	42,254	989.67	1,334	41.8	56.4	42.2	58.1
1972-73[3]	42,170	1,074.00	1,392	45.4	58.7	46.2	60.5
1973-74[4]	41,893	1,147.00	1,364	48.1	57.1	50.2	58.9
1974-75[3]	41.524	1,294.00	1,386	52.2	55.9	53.7	57.6
1975-76	41,373	1,388.00	1,388	57.4	57.4	59.1	59.1
				Projected[5]			
1976-77	40,800	[6] 1,530.00	1,455	62.4	59.4	64.3	61.1
1977-78	40,200	. . . .	1,525	. . . .	61.3	. . . .	63.1
1978-79	39,500	. . . .	1,595	. . . .	62.8	. . . .	64.7
1979-80	38,600	. . . .	1,665	. . . .	64.3	. . . .	66.2
1980-81	37,800	. . . .	1,740	. . . .	65.8	. . . .	67.7
1981-82	37,300	. . . .	1,815	. . . .	67.7	. . . .	69.7
1982-83	36,900	. . . .	1,895	. . . .	69.9	. . . .	72.0
1983-84	36,900	. . . .	1,970	. . . .	72.7	. . . .	74.9
1984-85	37,100	. . . .	2,050	. . . .	76.1	. . . .	78.3
1985-86	37,500	. . . .	2,130	. . . .	79.9	. . . .	82.3

[1] Includes only the current expenditures for public day schools allocated to pupil costs; excludes the other expenditures shown in footnote 2.

[2] Includes current expenditures for summer schools, adult education, and community colleges operated by school districts, in addition to expenditures allocable to pupil costs.

[3] Derived from estimates furnished by States.

[4] Derived from *Estimates of School Statistics, 1974-75,* National Education Association, Research Division.

[5] The projections of current expenditures of public school systems are based on these assumptions: (a) The ratio of average daily attendance to enrollment in grades K-12 of public schools (table 3) will remain constant at the level of 0.92 through 1985-86. (b) Current expenditures allocated to costs per pupil in average daily attendance will follow the 1965-66 through 1975-76 trend. (c) The ratio of current expenditures for all programs to current expenditures allocated to pupil costs will remain constant at the level of 1.04.

[6] Based on the assumption that the 1975-76 rate of inflation will continue through 1976-77.

For methodological details, see appendix A, table A-4, and discussion in text.

NOTE.–Data are for 50 States and the District of Columbia for all years. The expenditures shown in this table include current expenditures for administration of State boards of education and intermediate administrative units. Column 6 equals column 2 times column 4 and column 8 equals column 6 times 1.04.

SOURCES: Data are based on U.S. Department of Health, Education and Welfare, National Center for Education Statistics, publications: (1) *Statistics of State School Systems,* 1965-66 through 1973-74, and (2) *Statistics of Public Schools,* fall 1965 through 1975. Current expenditures were converted to 1975-76 dollars on the basis of the Consumer Price Index prepared by the Bureau of Labor Statistics, U.S. Department of Labor. (For method of converting, see appendix B, table B-9).

Table 34.–Current expenditures for salaries of classroom teachers in regular public elementary and secondary schools: United States, 1965-66 to 1985-86

Year	Number of classroom teachers (in thousands)[1]	Salaries of classroom teachers[2]			
		Average annual salary		Total (in billions)	
		Current dollars	1975-76 dollars	Current dollars	1975-76 dollars
(1)	(2)	(3)	(4)	(5)	(6)
1965-66	1,710	$ 6,500	$ 11,290	$ 11.1	$ 19.3
1966-67[3]	1,789	6,820	11,490	12.2	20.6
1967-68	1,855	7,320	11,940	13.6	22.1
1968-69[3]	1,936	7,900	12,300	15.3	23.8
1969-70	2,013	8,520	12,515	17.2	25.2
1970-71[3]	2,055	9,210	12,865	18.9	26.4
1971-72	2,063	9,615	12,960	19.8	26.7
1972-73[3]	2,103	10,082	13,065	21.2	27.5
1973-74[4]	2,138	10,693	12,715	22.9	27.2
1974-75[3]	2,165	11,595	12,420	25.1	26.9
1975-76	2,202	12,448	12,448	27.4	27.4
			Projected[5]		
1976-77	2,208	13,270	12,630	29.3	27.9
1977-78	2,197	. . . .	12,810	. . . .	28.1
1978-79	2,175	. . . .	12,990	. . . .	28.3
1979-80	2,149	. . . .	13,170	. . . .	28.3
1980-81	2,122	. . . .	13,350	. . . .	28.3
1981-82	2,111	. . . .	13,530	. . . .	28.6
1982-83	2,106	. . . .	13,710	. . . .	28.9
1983-84	2,120	. . . .	13,890	. . . .	29.4
1984-85	2,149	. . . .	14,070	. . . .	30.2
1985-86	2,188	. . . .	14,250	. . . .	31.2

[1] Data on number of classroom teachers from table 22.

[2] Average annual salaries of classroom teachers are being reported here because the data to estimate instructional staff salaries are no longer available since the collection definition has been changed.

[3] Estimates of salaries furnished by State education departments.

[4] Estimated.

[5] Projections of current expenditures for salaries of classroom teachers in public elementary and secondary schools are based on the assumption that average annual salaries will follow the 1965-66 through 1975-76 trend.

NOTE.–Data are for 50 States and the District of Columbia for all years.

SOURCES: Data are based on U.S. Department of Health, Education and Welfare, National Center for Education Statistics, publications: *Statistics of Public Schools*, fall 1965 through 1975. Conversion to 1975-76 dollars was based on the Consumer Price Index prepared by the Bureau of Labor Statistics, U.S. Department of Labor. (For method of converting, see appendix B, table B-9.)

Table 35.--Capital outlay of public elementary and secondary school systems: United States, 1965-66 through 1985-86

(In millions)

Year	Total capital outlay including construction, equipment, etc.	
	Current dollars	1975-76 dollars
(1)	(2)	(3)
1965-66	$3,755	$8,014
1966-67[1]	4,000	8,078
1967-68	4,256	8,157
1968-69[1]	4,654	8,240
1969-70	4,659	7,713
1970-71[1]	5,061	7,267
1966-67 to 1970-71	22,630	39,455
1971-72	4,459	6,050
1972-73[1]	4,091	5,095
1973-74	4,989	5,737
1974-75[2]	5,746	6,236
1975-76	5,983	5,983
1971-72 to 1975-76	25,268	29,101
	Projected[3]	
1976-77	6,295	5,730
1977-78	....	5,500
1978-79	....	5,290
1979-80	....	5,095
1980-81	....	4,915
1976-77 to 1980-81	....	26,530
1981-82	....	4,750
1982-83	....	4,595
1983-84	....	4,455
1984-85	....	4,325
1985-86	....	4,200
1981-82 to 1985-86	....	22,325

[1] Estimates furnished by State education departments.

[2] Estimated.

[3] Projections of capital outlay of public elementary and secondary school systems are based on the assumption that these expenditures will follow the 1965-66 through 1975-76 trend through 1985-86.

NOTE.–Data are for 50 States and the District of Columbia for all years.

SOURCES: Data are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Statistics of State School Systems*, 1965-66 through 1973-74; (2) *Statistics of Public Schools*, fall 1966 through fall 1975; and (3) *Expenditures and Revenues for Public Elementary and Secondary Education*, 1970-71 through 1973-74. Conversion to 1975-76 dollars was based on the American Appraisal Company Construction Cost Index published in Construction Review by the U.S. Department of Commerce. (For method of converting, see appendix B, table B-9).

Table 36.--Expenditures for interest by public elementary and secondary school systems: United States, 1965-66 through 1985-86

(In millions)

Year	Total interest including payments to schoolhousing authorities or similar agencies	
	Current dollars	1975-76 dollars
(1)	(2)	(3)
1965-66	$ 792	$1,376
1966-67[1]	949	1,599
1967-68	978	1,595
1968-69[1]	1,015	1,579
1969-70	1,171	1,720
1970-71[1]	1,318	1,841
1971-72	1,378	1,858
1972-73[2]	1,547	2,004
1973-74[3]	1,672	1,989
1974-75	1,737	1,860
1975-76	1,970	1,970
	Projected[4]	
1976-77	2,145	2,045
1977-78	....	2,115
1978-79	....	2,195
1979-80	....	2,270
1980-81	....	2,350
1981-82	....	2,435
1982-83	....	2,520
1983-84	....	2,605
1984-85	....	2,695
1985-86	....	2,785

[1] Estimates furnished by State education departments.

[2] Data from special study of expenditures and revenues for public elementary and secondary school systems.

[3] Derived from *Estimates of School Statistics, 1974-75*, National Education Association, Research Division.

[4] Projections of interest expenditure are based on assumption they will follow the 1965-66 through 1975-76 trend.

NOTE.–Data are for 50 States and the District of Columbia for all years.

SOURCES: Data are based on (1) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: *Statistics of State School Systems*, 1965-66 through 1973-74; *Statistics of Public Schools*, fall 1966 through fall 1975; *Expenditures and Revenues for Public Elementary and Secondary Education*, 1970-71 through 1973-74; and (2) National Education Association, Research Division, *Estimates of Schools Statistics, 1974-75*. Conversion to 1975-76 dollars was based on the Consumer Price Index prepared by the Bureau of Labor Statistics, U.S. Department of Labor. (For method of converting, see appendix B, table B-9).

Table 37.--Expenditures from current funds and total current expenditures (1975-76 dollars) by institutions of higher education: United States, 1965-66 to 1985-86

(In billions of 1975-76 dollars)

Year and control	Educational and general				Auxiliary enter-prises[5]	Hospitals and independent operations[6]	Mandatory trans-fers[7]	Total current expenditures (Cols. 2 thru 7 less col. 8)
	Student educa-tion[1]	Research[2]	Scholarships and fellowships[3]	Pub-lic service[4]				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1965-66:								
Total	$11.0	$3.0	$0.8	$1.4	$3.7	$1.8	$0.9	$20.8
Public . .	6.5	1.5	.3	1.1	2.0	.9	.6	11.7
Nonpublic	4.5	1.5	.5	.3	1.7	.9	.3	9.1
1966-67:								
Total	12.7	3.0	1.0	1.5	3.9	1.9	1.1	22.9
Public . .	7.7	1.6	.4	1.2	2.2	.9	.7	13.3
Nonpublic	5.0	1.4	.6	.3	1.7	1.0	.4	9.6
1967-68:								
Total	14.7	3.2	1.1	1.7	4.2	2.0	1.1	25.8
Public . .	9.3	1.8	.5	1.3	2.5	1.0	.7	15.7
Nonpublic	5.4	1.4	.6	.4	1.7	1.0	.4	10.1
1968-69:								
Total	16.8	3.1	1.3	1.6	4.0	2.0	.9	27.9
Public . .	10.8	1.8	.6	1.2	2.3	1.1	.6	17.2
Nonpublic	6.0	1.3	.7	.4	1.7	.9	.3	10.7
1969-70:								
Total	18.3	3.1	1.5	1.7	4.0	2.2	1.0	29.8
Public . .	12.0	1.8	.7	1.3	2.4	1.2	.8	18.6
Nonpublic	6.3	1.3	.8	.4	1.6	1.0	.2	11.2
1970-71:								
Total	19.7	3.1	1.5	1.8	4.2	2.3	.8	31.8
Public . .	13.2	1.9	.7	1.3	2.5	1.3	.6	20.3
Nonpublic	6.5	1.2	.8	.5	1.7	1.0	.2	11.5
1971-72:								
Total	20.9	3.1	1.6	1.9	4.3	2.6	.8	33.6
Public . .	14.2	1.8	.8	1.4	2.6	1.4	.6	21.6
Nonpublic	6.7	1.3	.8	.5	1.7	1.2	.2	12.0
1972-73:								
Total	22.3	3.1	1.7	1.9	4.3	2.9	.9	35.3
Public . .	15.3	2.0	.8	1.4	2.6	1.5	.7	22.9
Nonpublic	7.0	1.1	.9	.5	1.7	1.4	.2	12.4
1973-74:								
Total	22.8	3.0	1.7	1.8	4.3	2.9	.9	35.6
Public . .	15.8	1.9	.9	1.4	2.6	1.6	.7	23.5
Nonpublic	7.0	1.1	.8	.4	1.7	1.3	.2	12.1
1974-75:								
Total	22.8	3.4	1.6	1.7	4.3	3.7	1.0	36.5
Public . .	16.0	2.2	.8	1.4	2.7	2.0	.7	24.4
Nonpublic	6.8	1.2	.8	.3	1.6	1.7	.3	12.1
1975-76:[8]								
Total	25.6	3.3	1.8	1.8	4.4	3.8	1.0	39.7
Public . .	18.2	2.2	.9	1.4	2.7	2.1	.7	26.8
Nonpublic	7.4	1.1	.9	.4	1.7	1.7	.3	12.9
					Projected[9]			
1976-77:								
Total	27.3	3.3	1.8	1.8	4.4	3.9	1.0	41.5
Public . .	19.5	2.3	.9	1.4	2.7	2.1	.7	28.2
Nonpublic	7.8	1.0	.9	.4	1.7	1.8	.3	13.3

See footnotes at end of table.

Table 37.--Expenditures from current funds and total current expenditures (1975-76 dollars) by institutions of higher education: United States, 1965-66 to 1985-86--Continued

(In billions of 1975-76 dollars)

Year and control (1)	Educational and general: Student education[1] (2)	Educational and general: Research[2] (3)	Educational and general: Scholarships and fellowships[3] (4)	Educational and general: Public service[4] (5)	Auxiliary enterprises[5] (6)	Hospitals and independent operations[6] (7)	Mandatory transfers[7] (8)	Total current expenditures (Cols. 2 thru 7 less col. 8) (9)
				Projected[9]				
1977-78:								
Total	$ 29.1	$ 3.3	$ 2.0	$ 1.9	$ 4.4	$ 4.0	$ 1.0	$ 43.7
Public ..	20.9	2.3	1.0	1.5	2.7	2.2	.7	29.9
Nonpublic	8.2	1.0	1.0	.4	1.7	1.8	.3	13.8
1978-79:								
Total	30.7	3.3	2.1	2.0	4.7	4.0	1.0	45.8
Public ..	22.2	2.3	1.1	1.5	2.9	2.2	.7	31.5
Nonpublic	8.5	1.0	1.0	.5	1.8	1.8	.3	14.3
1979-70:								
Total	32.3	3.3	2.2	2.1	4.9	4.0	1.0	47.8
Public ..	23.5	2.3	1.1	1.6	3.1	2.2	.7	33.1
Nonpublic	8.8	1.0	1.1	.5	1.8	1.8	.3	14.7
1980-81:								
Total	33.7	3.3	2.3	2.2	5.1	4.0	1.0	49.6
Public ..	24.7	2.3	1.2	1.7	3.2	2.2	.7	34.6
Nonpublic	9.0	1.0	1.1	.5	1.9	1.8	.3	15.0
1981-82:								
Total	35.0	3.3	2.3	2.3	5.4	4.0	1.0	51.3
Public ..	25.7	2.3	1.2	1.8	3.4	2.2	.7	35.9
Nonpublic	9.3	1.0	1.1	.5	2.0	1.8	.3	15.4
1982-83:								
Total	36.2	3.3	2.4	2.3	5.5	4.0	1.0	52.7
Public ..	26.7	2.3	1.3	1.8	3.5	2.2	.7	37.1
Nonpublic	9.5	1.0	1.1	.5	2.0	1.8	.3	15.6
1983-84:								
Total	36.9	3.3	2.5	2.4	5.6	4.0	1.0	53.7
Public ..	27.3	2.3	1.3	1.9	3.6	2.2	.7	37.9
Nonpublic	9.6	1.0	1.2	.5	2.0	1.8	.3	15.8
1984-85:								
Total	37.3	3.3	2.5	2.4	5.7	4.0	1.0	54.2
Public ..	27.7	2.3	1.3	1.9	3.7	2.2	.7	38.4
Nonpublic	9.6	1.0	1.2	.5	2.0	1.8	.3	15.8
1985-86:								
Total	37.5	3.3	2.6	2.4	5.7	4.0	1.0	54.5
Public ..	27.9	2.3	1.4	1.9	3.7	2.2	.7	38.7
Nonpublic	9.6	1.0	1.2	.5	2.0	1.8	.3	15.8

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[1] Includes instruction, academic support, libraries, institutional support, student services, and operation and maintenance of the plant. These are the items most nearly comparable to "Student education" expenditures reported prior to 1974-75.

[2] Includes all sponsored research and other separately budgeted research with exception of federally funded research and development centers which are included under "independent operations."

[3] Moneys given in the form of outright grants and trainee stipends to individuals enrolled in formal coursework, either for credit or not. Includes aid in the form of tuition or fee remissions. Prior to 1974-75, this category was entitled "student aid" and was not an educational and general item.

[4] Includes all expenditures for public service, activities established primarily to provide noninstructional services beneficial to groups external to the institution, such as seminars and projects provided to the community. Includes expenditures for cooperative extension services. Includes mandatory transfers from educational general items. Public service appears to be somewhat comparable to expenditures previously grouped under "related activities."

[5] Includes resident halls, food services, college stores, and intercollegiate athletics. Includes mandatory transfers from auxiliary enterprises.

[6] Includes expenditures for hospitals and for "independent operations" which are generally limited to expenditures of Federally Funded Research and Development Centers. Includes mandatory transfers from hospitals and independent operations.

[7] Mandatory transfers from current funds are those that must be made to fulfill a binding legal obligation of the

institution. Includes debt-service provisions relating to academic buildings, including amounts set aside for debt retirement and interest, and required provisions for renewal and replacements to the extent not financed from other sources.

[8] Estimated.

[9] The projection of expenditures from current funds is based on the following assumptions: (a) Expenditure for "student education" per full-time-equivalent student will continue to increase as it did during the base period. (b) "Scholarships and fellowships," "public service," and "auxiliary enterprises" are projected on the percentage of these items to "student education with the percentage trend frozen at the 1976-77 level for the remainder of the projection. "Research," "hospitals and independent operations" and "mandatory transfers" are projected on the base-years trend in dollar amounts and held at the 1976-77 level.

NOTE.—Data are for 50 States and the District of Columbia for all years.

SOURCES: Expenditure data from U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: *Financial Statistics of Institutions of Higher Education,* 1965-66 through 1972-73 and unpublished data for 1973-74 and 1974-75. Conversion to 1975-76 dollars was based on the Consumer Price Index published by the Bureau of Labor Statistics, U.S. Department of Labor. (For method of converting the index, see appendix B, table B-9).

Table 38.--Expenditures from current funds and total current expenditures (current dollars) by institutions of higher education: United States, 1965-66 to 1985-86

(In billions of current, unadjusted dollars)

Year and control	Education and general				Auxiliary enter-prises[5]	Hospitals and independent operations[6]	Mandatory trans-fers[7]	Total current expenditures (Cols. 2 thru 7 less col. 8)
	Student educa-tion[1]	Research[2]	Scholarships and fellowships[3]	Pub-lic service[4]				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1965-66:								
Total	$6.4	$1.8	$0.4	$0.8	$2.1	$1.0	$0.6	$11.9
Public . .	3.8	.9	.1	.6	1.2	.5	.4	6.7
Nonpublic	2.6	.9	.3	.2	.9	.5	.2	5.2
1966-67:								
Total	7.5	1.8	.5	.9	2.3	1.2	.6	13.6
Public . .	4.6	.9	.2	.7	1.3	.6	.4	7.9
Nonpublic	2.9	.9	.3	.2	1.0	.6	.2	5.7
1967-68:								
Total	9.0	2.0	.7	1.0	2.6	1.2	.7	15.8
Public . .	5.7	1.1	.3	.8	1.5	.6	.4	9.6
Nonpublic	3.3	.9	.4	.2	1.1	.6	.3	6.2
1968-69:								
Total	10.7	[illegible]	.9	1.0	2.5	1.3	.6	17.9
Public . .	6.9	1.2	.4	.8	1.4	.7	.4	11.0
Nonpublic	3.8	.9	.5	.2	1.1	.6	.2	6.9
1969-70:								
Total	12.4	2.2	1.0	1.2	2.8	1.5	.8	20.3
Public . .	8.2	1.3	.5	.9	1.6	.8	.6	12.7
Nonpublic	4.2	.9	.5	.3	1.2	.7	.2	7.6
1970-71:								
Total	14.2	2.2	1.1	1.3	3.0	1.6	.6	22.8
Public . .	9.5	1.3	.5	1.0	1.8	.9	.4	14.6
Nonpublic	4.7	.9	.6	.3	1.2	.7	.2	8.2
1971-72:								
Total	15.5	2.3	1.2	1.4	3.2	1.9	.6	24.9
Public . .	10.5	1.4	.6	1.0	1.9	1.0	.4	16.0
Nonpublic	5.0	.9	.6	.4	1.3	.9	.2	8.9
1972-73:								
Total	17.2	2.4	1.4	1.5	3.3	2.2	.7	27.3
Public . .	11.8	1.5	.7	1.1	2.0	1.1	.5	17.7
Nonpublic	5.4	.9	.7	.4	1.3	1.1	.2	9.6
1973-74:								
Total	19.2	2.5	1.4	1.6	3.6	2.4	.8	29.9
Public . .	13.3	1.6	.7	1.2	2.2	1.3	.6	19.7
Nonpublic	5.9	.9	.7	.4	1.4	1.1	.2	10.2
1974-75:								
Total	21.4	3.1	1.5	1.6	4.1	3.4	1.0	34.1
Public . .	15.1	2.0	.7	1.3	2.6	1.8	.7	22.8
Nonpublic	6.3	1.1	.8	.3	1.5	1.6	.3	11.3
1975-76:[8]								
Total	25.6	3.3	1.8	1.8	4.4	3.8	1.0	39.7
Public . .	18.2	2.2	.9	1.4	2.7	2.1	.7	26.8
Nonpublic	7.4	1.1	.9	.4	1.7	1.7	.3	12.9
					Projected[9]			
1976-77:								
Total	28.8	3.5	2.0	1.8	4.4	4.2	1.0	43.7
Public . .	20.6	2.4	1.0	1.4	2.7	2.3	.7	29.7
Nonpublic	8.2	1.1	1.0	.4	1.7	1.9	.3	14.0

See footnotes on page 81.

[1] Includes instruction, academic support, libraries, institutional support, student services, and operation and maintenance of the plant. These are the items most nearly comparable to "Student education" expenditures reported prior to 1974-75.

[2] Includes all sponsored research and other separately budgeted research with exception of federally funded research and development centers which are included under "independent operations."

[3] Moneys given in the form of outright grants and trainee stipends to individuals enrolled in formal coursework, either for credit or not. Includes aid in the form of tuition or fee remissions. Prior to 1974-75, this category was entitled "student aid" and was not an educational and general item.

[4] Includes all expenditures for public service, activities established primarily to provide noninstructional services beneficial to groups external to the institution, such as seminars and projects provided to the community. Includes expenditures for cooperative extension services. Includes mandatory transfers from educational general items. Public service appears to be somewhat comparable to expenditures previously grouped under "related activities."

[5] Includes resident halls, food services, college stores, and intercollegiate athletics. Includes mandatory transfers from auxiliary enterprises.

[6] Includes expenditures for hospitals and for "independent operations" which are generally limited to expenditures of federally funded research and development centers. Includes mandatory transfers from hospitals and independent operations.

[7] Mandatory transfers from current funds are those that must be made to fulfill a binding legal obligation of the institution. Includes debt-service provisions relating to academic buildings, including amounts set aside for debt retirement and interest, and required provisions for renewal and replacements to the extent not financed from other sources.

[8] Estimated.

[9] Projected by applying Consumer Price Index estimates to the projected expenditures of current funds in constant dollars (table 37).

For further methodological details, see appendix A, table A-4.

NOTE.—Data are for 50 States and the District of Columbia for all years.

SOURCES: Expenditure data from U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publication: *Financial Statistics of Institutions of Higher Education.*

Table 39.--Capital outlay of institutions of higher education: United States, 1965-66 to 1985-86

Year	Total		Public		Nonpublic	
	Millions of current dollars	Millions of 1975-76 dollars	Millions of current dollars	Millions of 1975-76 dollars	Millions of current dollars	Millions of 1975-76 dollars
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1965-66	$3,253	$6,943	$2,064	$4,405	$1,189	$2,538
1966-67	3,943	7,964	2,573	5,196	1,370	2,768
1967-68	4,175	8,002	2,732	5,236	1,443	2,766
1968-69[1]	4,057	7,184	2,978	5,273	1,079	1,911
1969-70	4,332	7,172	3,066	5,076	1,266	2,096
1970-71	4,344	6,545	3,147	4,742	1,197	1,803
1966-67 to 1970-71	20,851	36,867	14,496	25,523	6,355	11,344
1971-72	4,336	5,884	3,156	4,283	1,180	1,601
1972-73	4,092	5,097	3,045	3,793	1,047	1,304
1973-74	4,440	5,105	3,276	3,767	1,164	1,338
1974-75	4,798	5,206	3,474	3,770	1,324	1,436
1975-76[2]	5,127	5,127	3,619	3,619	1,508	1,508
1971-72 to 1975-76	22,793	26,419	16,570	19,232	6,223	7,187
			Projected[3]			
1976-77	5,554	5,056	3,815	3,473	1,739	1,583
1977-78	....	5,056	....	3,473	....	1,583
1978-79	....	5,056	....	3,473	....	1,583
1979-80	....	5,056	....	3,473	....	1,583
1980-81	....	5,056	....	3,473	....	1,583
1976-77 to 1980-81	....	25,280	....	17,365	....	7,915
1981-82	....	5,056	....	3,473	....	1,583
1982-83	....	5,056	....	3,473	....	1,583
1983-84	....	5,056	....	3,473	....	1,583
1984-85	....	5,056	....	3,473	....	1,583
1985-86	....	5,056	....	3,473	....	1,583
1981-82 to 1985-86	....	25,280	....	17,365	....	7,915

[1] Interpolation based on reported value of plant at close of previous year and the beginning of the following year.

[2] Estimated.

[3] Estimates and projections for 1975-76 and 1976-77 are based on reported capital outlay for 1972-73 through 1974-75 (in constant dollars) and then frozen at that level for the remainder of the projection.

NOTE.–Data are for 50 States and the District of Columbia for all years.

SOURCES: Capital outlay data from U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: *Financial Statistics of Institutions of Higher Education,* 1965-66 through 1972-73, and unpublished data for 1973-74 and 1974-75. Conversion to 1975-76 dollars was based on the American Appraisal Company Construction Cost Index published in Construction Review by the U.S. Department of Commerce.

CHAPTER VI

Student Charges by Institutions of Higher Education

C. George Lind

Estimated average student charges are based on the charges reported by institutions of higher education for the years 1966-67, 1968-69, 1971-72, 1972-73, 1973-74, and 1974-75. To the extent that data were available, the reported charges were weighted by the numbers of full-time resident degree-credit students who were subject to the charges. Full-time-equivalent resident undergraduate degree-credit students became the weighting factor beginning in 1973-74. Where base data did not include 2-year institution zero charges in the calculations, an estimate has been made for inclusion. Where base-year data had demonstrably included charges for out-of-district but in-state, for public 2-year institutions, rather than in-district charges, a correcting estimate has been made.

From 1972-73 to 1974-75 (the last year of data) there have been sizable increases in tuition and fees, room, and board in current unadjusted dollars. However, when the data from 1972-73 to 1974-75 are converted to constant 1975-76 dollars, to take into account changes in the consumer price index (see appendix table B-10), the figures show a decrease in each category.

Projections in past editions, which did not anticipate these constant-dollar decreases, have tended to be too high. Projections in this publication, which do take into account the constant-dollar decreases, continue projecting increases based on overall past trends. However, since there have been recent breaks in the long-term trends, the projections in this publication should be used with a great deal of caution.

Estimated average charge per student (entire academic year) (tables 40, 41)

The estimated average student charges (tuition and required fees, board, and room) by publicly controlled institutions of higher education, *in 1975-76 constant dollars,* increased from $1,707 in 1965-66 to $1,748 in 1975-76 and are expected to reach $1,975 by 1985-86 (table 40). Estimated average student charges by nonpublicly controlled institutions of higher education were $3,483 in 1965-66, $3,667 in 1975-76, and are expected to reach $4,176 by 1985-86 (table 40). Please observe that table 40 reflects the adjustment of base data to 1975-76 constant dollars, an adjustment of +73.7 percent for 1965-66. Tuition and required fees, *in constant 1975-76 dollars,* charged by publicly controlled institutions rose by $446 in 1965-66 to $513 in 1975-76, and are expected to reach $612 by 1985-86. Nonpublicly controlled institutions charged an estimated average tuition and fees of $2,005 in 1965-66, $2,333 in 1975-76, and are projected to be charging $2,840 by 1985-86, *in constant 1975-76 dollars.* Required fees are those for matriculation, laboratory, library, health, etc., but do not include books. The varying charges for tuition and required fees, by control and type of institution, are influenced by income of publicly controlled institutions of higher education from government sources and income of nonpublicly controlled institutions from endowment funds and from private gifts and grants, as well as from varying costs of educating students in different types of institutions.

Charges for board, *in constant 1975-76 dollars,* have declined slightly during the base period, with the exception of those for public 2-year institutions. The declines are not projected since many large institutions had held their board charges unchanged in unadjusted dollars which would result in a decline *in constant 1975-76 dollars.* We do not expect that practice to continue on a long-term basis.

Charges for dormitory rooms have increased moderately, *in constant 1975-76 dollars,* and the variance between publicly and nonpublicly controlled institutions has been gradually disappearing. We project virtually no variance by 1980-81.

Table 40.--Estimated average charges (1975-76 dollars) per full-time undergraduate resident degree-credit student in institutions of higher education, by institutional type and control: United States, 1965-66 to 1985-86

(Charges are for the academic year and in constant 1975-76 dollars)

Year and control	Total tuition, board and room				Tuition and required fees				Board (7-day basis)				Dormitory rooms			
	All	University	Other 4-year	2-year	All	University	Other 4-year	2-year	All	University	Other 4-year	2-year	All	University	Other 4-year	2-year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1965-66[1]																
Public	$1,707	$1,920	$1,567	$1,164	$ 446	$ 568	$ 417	$ 189	$773	$822	$709	$638	$488	$530	$441	$337
Nonpublic	3,483	4,023	3,295	2,705	2,005	2,378	1,886	1,334	860	919	837	822	618	726	572	549
1966-67:[2]																
Public	1,728	1,974	1,596	1,197	463	607	436	204	770	826	703	634	495	541	457	359
Nonpublic	3,580	4,138	3,382	2,830	2,078	2,453	1,958	1,424	853	923	826	821	649	762	598	585
1967-68:[1]																
Public	1,733	1,956	1,626	1,286	461	597	437	234	762	809	713	656	510	550	476	396
Nonpublic	3,596	4,149	3,430	2,875	2,115	2,501	2,016	1,456	842	907	818	822	639	741	596	597
1968-69:[2]																
Public	1,737	1,936	1,654	1,373	459	586	437	264	754	792	722	677	524	558	495	432
Nonpublic	3,610	4,158	3,480	2,918	2,151	2,548	2,077	1,487	831	890	809	823	628	720	594	608
1969-70:[1]																
Public	1,768	2,000	1,670	1,397	475	627	450	262	750	793	710	683	543	580	510	452
Nonpublic	3,718	4,285	3,555	2,928	2,252	2,657	2,158	1,518	825	893	797	803	641	735	600	607
1970-71:[1]																
Public	1,799	2,064	1,686	1,421	491	668	463	260	746	794	698	689	562	602	525	472
Nonpublic	3,826	4,412	3,630	2,938	2,353	2,766	2,239	1,549	819	896	785	783	654	750	606	606
1971-72:[2]																
Public	1,830	2,128	1,702	1,446	507	709	477	259	743	795	686	694	580	624	539	493
Nonpublic	3,932	4,549	3,704	2,947	2,453	2,875	2,320	1,580	813	898	772	762	666	776	612	605
1972-73:[2]																
Public	1,889	2,161	1,893	1,551	527	733	590	302	745	780	713	733	617	648	590	516
Nonpublic	3,936	4,550	3,802	2,945	2,459	2,884	2,392	1,582	798	860	775	771	679	806	635	592
1973-74:[2]																
Public	1,804	2,031	1,792	1,515	521	691	551	326	712	739	689	703	571	601	552	486
Nonpublic	3,764	4,421	3,615	2,866	2,366	2,825	2,289	1,550	764	856	729	742	634	740	597	574
1974-75:[2]																
Public	1,732	1,924	1,691	1,478	503	639	507	338	688	722	655	685	541	563	529	455
Nonpublic	3,626	4,243	3,456	2,681	2,282	2,714	2,179	1,436	735	805	708	696	609	724	569	549
1975-76:[3]																
Public	1,748	1,943	1,722	1,522	513	656	526	353	681	712	652	695	554	575	544	474
Nonpublic	3,667	4,298	3,499	2,685	2,333	2,775	2,233	1,455	724	796	695	683	610	727	571	547

	Projected[4]															
1976-77:																
Public	1,765	1,963	1,754	1,567	523	674	545	368	674	703	649	706	568	586	560	493
Nonpublic	3,708	4,352	3,543	2,689	2,384	2,836	2,287	1,473	712	787	683	671	612	729	573	545
1977-78:																
Public	1,788	1,992	1,789	1,609	533	691	565	382	674	703	649	716	581	598	575	511
Nonpublic	3,759	4,415	3,600	2,708	2,434	2,896	2,342	1,492	712	787	683	671	613	732	575	545
1978-79:																
Public	1,811	2,022	1,823	1,654	542	709	584	397	674	703	649	727	595	610	590	530
Nonpublic	3,811	4,479	3,656	2,726	2,485	2,957	2,396	1,510	712	787	683	671	614	735	577	545
1979-80:																
Public	1,834	2,050	1,858	1,698	552	726	603	412	674	703	649	737	608	621	606	549
Nonpublic	3,864	4,543	3,712	2,745	2,536	3,018	2,450	1,529	712	787	683	671	616	738	579	545
1980-81:																
Public	1,858	2,080	1,892	1,742	562	744	622	427	674	703	649	747	622	633	621	568
Nonpublic	3,916	4,606	3,768	2,763	2,587	3,079	2,504	1,547	712	787	683	671	617	740	581	545
1981-82:																
Public	1,881	2,109	1,927	1,785	572	761	641	441	674	703	649	758	635	645	637	586
Nonpublic	3,968	4,670	3,824	2,782	2,637	3,140	2,558	1,566	712	787	683	671	619	743	583	545
1982-83:																
Public	1,905	2,138	1,962	1,829	582	778	661	456	674	703	649	768	649	657	652	605
Nonpublic	4,020	4,733	3,881	2,800	2,688	3,200	2,613	1,584	712	787	683	671	620	746	585	545
1983-84:																
Public	1,928	2,167	1,996	1,873	592	796	680	471	674	703	649	778	662	668	667	624
Nonpublic	4,072	4,796	3,937	2,819	2,739	3,261	2,667	1,603	712	787	683	671	621	748	587	545
1984-85:																
Public	1,952	2,196	2,031	1,918	602	813	699	486	674	703	649	789	676	680	683	643
Nonpublic	4,125	4,860	3,992	2,837	2,790	3,322	2,721	1,621	712	787	683	671	623	751	588	545
1985-86:																
Public	1,975	2,226	2,065	1,960	612	831	718	500	674	703	649	799	689	692	698	661
Nonpublic	4,176	4,924	4,048	2,856	2,840	3,383	2,775	1,640	712	787	683	671	624	754	590	545

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[1] Interpolated.

[2] Represents charges weighted by full-time resident students for 1966-67; by full-time undergraduate degree-credit students for 1968-69; by total full-time students for 1971-72; and by full-time equivalent resident degree-credit students for 1972-73, 1973-74, and 1974-75.

[3] Estimated.

[4] Decreases in charges during the base period, in constant 1975-76 dollars, are frozen at the 1976-77 level.

SOURCES: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Higher Education Basic Student Charges,* 1966-67, 1968-69, 1971-72, 1972-73 and 1974-75, and (2) *Opening Fall Enrollment in Higher Education,* 1966, 1968, 1971, 1972, 1973, and 1974.

Table 41.–Estimated average charges (current dollars) per full-time undergraduate resident degree-credit student in institutions of higher education, by institutional type and control: United States, 1965-66 to 1976-77

(Charges are for the academic year and in current unadjusted dollars)

Year and control	Total tuition, board and room				Tuition and required fees				Board (7-day basis)				Dormitory rooms			
	All	University	Other 4-year	2-year	All	University	Other 4-year	2-year	All	University	Other 4-year	2-year	All	University	Other 4-year	2-year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1965-66[1]																
Public	$ 983	$1,105	$ 902	$ 670	$ 257	$ 327	$ 240	$ 109	$445	$473	$408	$367	$281	$305	$254	$194
Nonpublic	2,005	2,316	1,897	1,557	1,154	1,369	1,086	768	495	529	482	473	356	418	329	316
1966-67:																
Public	1,026	1,171	947	710	275	360	259	121	457	490	417	376	294	321	271	213
Nonpublic	2,124	2,456	2,007	1,679	1,233	1,456	1,162	845	506	548	490	487	385	452	355	347
1967-68:[1]																
Public	1,063	1,199	997	789	283	366	268	144	467	496	437	402	313	337	292	243
Nonpublic	2,205	2,544	2,104	1,763	1,297	1,534	1,236	893	516	556	502	504	392	454	366	366
1968-69:																
Public	1,117	1,245	1,063	883	295	377	281	170	485	509	464	435	337	359	318	278
Nonpublic	2,321	2,673	2,237	1,876	1,383	1,638	1,335	956	534	572	520	529	404	463	382	391
1969-70:[1]																
Public	1,204	1,362	1,136	951	323	427	306	178	511	540	483	465	370	395	347	308
Nonpublic	2,531	2,917	2,421	1,994	1,533	1,809	1,469	1,034	562	608	543	547	436	500	409	413
1970-71:[1]																
Public	1,288	1,478	1,208	1,017	352	478	332	186	534	569	500	493	402	431	376	338
Nonpublic	2,739	3,159	2,599	2,104	1,685	1,980	1,603	1,109	586	642	562	561	468	537	434	434
1971-72:																
Public	1,357	1,579	1,263	1,073	376	526	354	192	551	590	509	515	430	463	400	366
Nonpublic	2,917	3,375	2,748	2,186	1,820	2,133	1,721	1,172	603	666	573	565	494	576	454	449
1972-73:																
Public	1,458	1,668	1,460	1,197	[2]407	566	455	[2]233	575	602	550	566	476	500	455	398
Nonpublic	3,038	3,512	2,934	2,273	1,898	2,226	1,846	1,221	616	664	598	595	524	622	490	457
1973-74:																
Public	1,517	1,707	1,506	1,274	[2]438	581	463	[2]274	599	621	579	591	480	505	464	409
Nonpublic	3,164	3,717	3,040	2,410	1,989	2,375	1,925	1,303	642	720	613	624	533	622	502	483
1974-75:																
Public	1,617	1,797	1,579	1,381	[2]470	597	473	[2]316	642	674	612	640	505	526	494	425
Nonpublic	3,386	3,962	3,227	2,504	2,131	2,534	2,035	1,341	686	752	661	650	569	676	531	513
1975-76:[1]																
Public	1,748	1,943	1,722	1,522	513	656	526	353	681	712	652	695	554	575	544	474
Nonpublic	3,667	4,298	3,499	2,685	2,333	2,775	2,233	1,455	724	796	695	683	610	727	571	547

Projected																
1976-77:[1]																
Public	1,854	2,063	1,843	1,647	549	708	573	387	708	739	682	742	597	616	588	518
Nonpublic	3,896	4,573	3,723	2,826	2,505	2,980	2,403	1,548	748	827	718	705	643	766	602	573

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[1] Data for 1965-66, 1967-68, 1969-70, 1970-71, 1975-76, and 1976-77 estimated by applying the Consumer Price Index to the data in table 40. (See constant-dollar index, appendix B, table B-9).

[2] Estimated: 1973-74 reported data for publicly controlled 2-year institutions contained an identifiable error which had the effect of reducing tuition averages by a minimum of 16 percent. On the premise that 1974-75 data will contain at least that degree of over-reporting, the reported average tuition charge for 1974-75 has been reduced accordingly. 1972-73 and 1973-74 charges represent interpolation to 1971-72 when both in-District and out-of-District tuition charges were reported.

SOURCES: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Higher Education Basic Student Charges*, 1966-67, 1968-69, 1971-72, 1972-73 and 1973-74, and 1974-75, and (2) *Opening Fall Enrollment in Higher Education*, 1966, 1968, 1971, 1972, 1973, and 1974.

TECHNICAL APPENDIX A

General Methodology

Estimation Methods

Classification of Degrees by Field of Study

Changes in Degree-Level Definitions

Glossary

General Methodology

The 1976 projections of educational data by the National Center for Education Statistics are based on reports of regular elementary and secondary day schools, both public and private, and of accredited institutions of higher education listed in the *Education Directory* of the National Center for Education Statistics.[1] The projections include enrollments at all levels, high school graduates, teacher and faculty demand, and expenditures in elementary and secondary schools and in institutions of higher education. Of these projections, those based directly on population were for: the number of children attending independent nursery and kindergarten schools, those attending the first grade of regular public schools, enrollments in higher education, and high school graduates. The others, with the exception of enrollment in grades 2 through 12 of the public schools, degrees by level, and degrees by field, were based on enrollments. Enrollments in grades 2 through 12 of public schools were based on grade retention rates. (Retention rates could not be used for projecting higher education enrollments because the data on these enrollments have not been collected by year of enrollment.) Degrees by field were based on enrollments and the distribution of total degrees by field.

The population averaging 18 years of age was chosen for projecting both high school graduates and first-time college enrollment. This age group gave a smoother fit when correlated with these data than could be obtained with other age groups. For projecting first-grade enrollments, the population aged 6 years was used.

The population aged 18-21 years was used for projecting college enrollments in both degree-credit and non-degree-credit courses. For estimating and projecting degrees, enrollments were primarily used. Bachelor's degrees were based on first-time degree-credit enrollment 4 years earlier. Master's degrees were based on the average first-year enrollment for advanced degrees 1 and 2 years earlier. Doctor's degrees were based on the average first-year enrollment for advanced degrees 7 and 8 years earlier. The estimate of a 7- and 8-year average time lapse between first-year enrollment for advanced degrees and doctor's degrees was made on the basis of unpublished data from the National Science Foundation.[2]

For making the projections, regression methods were used wherever a trend could be established. Where no consistent series was available or the data were too irregular to establish a trend, a constant based on the latest observation or an average of the last two or three observations was used.

For some projections–such as graduate enrollments, enrollments in institutions of higher education by full-time and part-time attendance, and non-degree-credit enrollments–relationships had to be obtained from a different series of data and transferred to the opening fall higher education enrollment series. The latter series is current and has been reasonably consistent in the past, although prior to 1969 it lacked some detailed characteristics which are required by educators for decisionmaking. For the trend, observations in the 11 most recent years were used, and these were extrapolated for 10 years into the future. The 11-year timespan was considered better than a longer timespan because of the rapid changes in economic and social conditions and the improvement in the available statistics in recent years.

Straight lines and logistic growth curves, fitted by the least squares technique to a ratio (for example, of enrollment to population) as the dependent variable and time in years as the independent variable, were primarily used for projecting.

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[1] U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Education Directory, 1974–75, Higher Education* (Washington, D.C.: U.S. Government Printing Office, 1975).

[2] National Science Foundation, Science Education Studies Group, unpublished analysis.

Logistic growth curves of the form

$$y' = \frac{K}{1+e^{-(a+bt)}}$$

were used when it was decided that continued straight-line growth would be unrealistic. Since the logistic growth curve is asymptotic (has an upper limit) at the point K, an upper limit must be selected. In many cases, the selection of an asymptote is limited by the nature of the statistic itself (no more than 100 percent of the 5-year-olds can be enrolled) or by consideration of external factors (it is extremely unlikely that the money required to support a 10-to-1 pupil-teacher ratio nationally will be available during the next 10 years). However, in some cases the selection of an asymptote is somewhat arbitrary.

Logistic growth curves are fitted by making the transformation

$$z' = \ln\frac{y'}{K-y'}$$

and then fitting a straight line to the z values. It should be noted that the standard error is in terms of the z values, not the y values.

For both the straight line and the logistic growth curve, the fitted curve often lies considerably above or below the last observed point, resulting in an unusual rise or drop from the last actual observation. To avoid this and give face validity to the projections, the fitted curve was used only to establish the last point, and a new curve was drawn through the last observed ratio and the end point on the fitted curve. (In this case, the fitted equation is used only to establish the ratio at the end of the 10-year span.)

For each major area (enrollments, degrees, teachers, and expenditures), the tables that follow outline the equations and constants that were used; the standard error and index of determination, when appropriate; and the adjusted equations, if used. Footnotes explain the meaning of the variables and constants used for estimating.

The tables are followed by sections which explain the methods used in estimating missing data of the past 11 years, define the meaning of terms as used by the National Center for Education Statistics in requesting data, and outline the classification of summarized degree data.

Figure 9.--School- and college-age population, with alternatives: United States, October 1965 to 1985

(Data from tables B-1 and B-2)

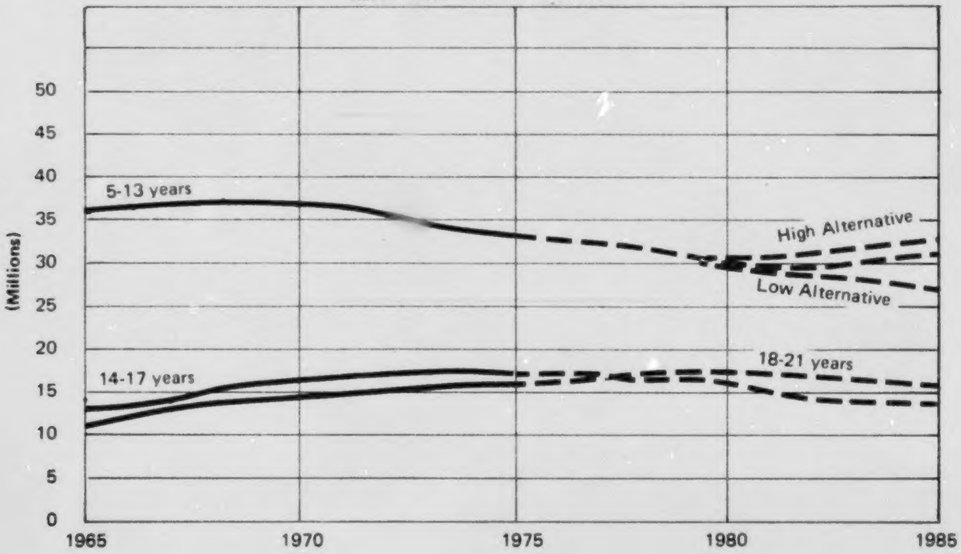

Table A-1.--Methodology (Chapter II)

	Text table number	Projection method					
		Constant	Trend				Other
			Least squares equation (y=percent; t=year; 1965=1)[1]	Index of determination	Standard error	Adjusted equation[2]	
Fall enrollment (independent public kindergarten and nursery schools	2	....	....	......	......	....	(3)
3 years old[4]			$y'=0.60+0.0.44t$	0.93	0.42	$y'=1.65+0.39t$	
4 years old[5]			$y'=8.17+0.85t$	.93	.82	$y'=10.06+0.76t$	
5 years old[6]			$y'=82/[1+e^{-(0.31+0.11t)}]$	.98	.059	$y'=83/[1.+e^{-(0.39+0.11t)}]$	
6 years old[7]			$y'=2.80+0.19t$	.76	.37	$y'=3.04+0.18t$	
Fall enrollment (independent nonpublic kindergarten and nursery schools)	2	....	....	......	......	....	(3)
3 years old[9]	....	....	$y'=1.98+1.17t$	.96	.87	$y'=3.30+1.10t$	
4 years old[10]	....	....	$y'=6.01+1.48t$	.98	.69	$y'=5.63+1.50t$	
5 years old[11]	....	12.44					
6 years old[12]	....	0.41					
Fall enrollment (regular public day schools)	3						
Kindergarten[13]	....	85.7					
Grade 1[14]	....	94.0					
Grade 2[15]	....	94.9					
Grade 3[16]	....	98.7					
Grade 4[17]	....	99.1			.71		
Grade 5[18]	....	99.4			.54		
Grade 6[19]	....	99.7			.57		
Grade 7[20]	....	102.7		.59	.59		
Grade 8[21]	....	98.8			.51		
Grade 9[22]	104.4	104.4		.38	.38		
Grade 10[23]	....	96.9			.53		
Grade 11[24]	....	91.2			.81		
Grade 12[25]	....	90.0			.97		
Elementary ungraded[26]	....	....	$y'=0.84+0.20t$	0.92	0.20	$y'=1.50+0.16t$	
Secondary ungraded[27]	....	2.0					
Postgraduate[28]	....	22,000					
Organization level[29]	4	64.8					
Fall enrollment (regular nonpublic day schools)	3,4						
Grades kindergarten to 8[30]	....	3,900,000					
Grades 9 to 12[31]	....	1,400,000					
Degree-credit fall enrollment[32]	5,10,14						

Table A-1.–Methodology (Chapter II)–Continued

	Text table number	Projection method					
		Constant	Trend				Other
			Least squares equation (y=percent; t=year; 1965=1)[1]	Index of determination	Standard error	Adjusted equation[2]	
Men							
Full-time undergraduate and unclassified[33]	....	36.6					
Public 4-year institutions[34]	....	55.0					
Private 4-year institutions	....	....	....	......	......	....	(35)
Public 2-year instititions[36]	....	....	$y'=15/[1-e^{-(0.787+0.024t)}]$	.90	.022	$y'=15/[1-e^{-(0.753+0.026t)}]$	
Private 2-year institutions[34]		1.2					
High alternative[37]	....	B-5	$y'=34.74+0.22t$				
Low alternative[38]	....	B-5	$y'=38.14-0.27t$	0.22	1.34	$y'=39.07-0.32t$	
Total undergraduate and unclassified							
Public 4-year institutions[39]	....	....	$y'=83.74-0.68t$	.92	.52	$y'82.63-0.62t$	
Private 4-year institutions[39]	....	....	$y'=80.74-0.18t$	.55	.43	$y'=81.11-0.20t$	
Public 2-year institutions[39]	....	....	$y'=25/[1-e^{-(0.607+0.065t)}]$	.85	.074	$y'=25/[1+e^{-(0.732+0.058t)}]$	
Private 2-year institutions[39]	....	....	$y'=87.81-2.29t$	.80	3.06	$y'=97.53-1.83t$	
Full-time graduate[40]	....	....	$y'=10.79+0.16t$	.96	.085	$y'=10.88+0.15t$	
Public 4-year institutions[41]	....	68.3					
Total graduate	14						
Public 4-year institutions[42]	....	41.2					
Private 4-year institutions[42]	....	42.0					
Full-time first-professional[43]	....	27.6					
Public 4-year institutions[44]	....	42.9					
Total first-professional							
Public 4-year institutions[45]	....	96.0					
Private 4-year institutions[45]	....	89.6					
Women							
Full-time undergraduate and unclassified[46]	....	....	$y'=26.25+0.42t$	0.72	0.69	$y'=26.23+0.42t$	
Public 4-year institutions[34]	....	57.4					
Private 4-year institutions	....	....	....	......	......	....	(35)
Public 2-year institutions[36]	....	....	$y'=15/[1-e^{-(0.776+0.23t)}]$	.93	.016	$y'=15/[1-e^{-(0.763+0.024t)}]$	
Private 2-year institutions[34]	....	1.16					
High alternative[46]	....	....	$y'=26.25+0.42t$	.72	.69	$y'=26.23+0.42t$	
Low alternative[33]	....	29.6					
Total undergraduate and unclassified							
Public 4-year institutions[39]	....	....	$y'=80.28-0.54t$	.77	.78	$y'=78.33-0.43t$	

Private 4-year institutions[39]	....	....	$y'=82.62-0.63t$	.86	.67	$y'=80.90-0.54t$	
Public 2-year institutions[39]	....	....	$y'=25/[1-e^{-(0.607+0.065t)}]$	.85	.074	$y'=25/[1-e^{-(0.732+0.058t)}]$	
Private 2-year institutions[39]	....	....	$y'=87.81-2.29t$	.80	3.06	$y'=79.53-1.83t$	
Full-time graduate[40]	....	....	$y'=5.90+0.27t$	.85	.30	$y'=6.31+0.25t$	
Public 4-year institutions[41]	....	69.9					
Total graduate	14						
Public 4-year institutions[42]	....	26.8					
Private 4-year institutions[42]	....	35.5					
Full-time first-professional[43]	....	24.7					
Public 4-year institutions[44]	....	46.0					
Total first-professional							
Public 4-year institutions[45]	....	83.6					
Private 4-year institutions[45]	....	86.8					
Non-degree-credit fall enrollment	5						
Men							
Full-time[47]	....	....	$y'=1.68+0.34t$	0.90	0.29	$y'=2.50+0.29t$	
Public 4-year institutions[48]	....	24,000					
Private 4-year institutions[48]	....	10,000					
Public 2-year institutions	....	....	....	......	......	....	(49)
High alternative[47]	....	....	$y'=20/[1+e^{(2.25-0.12t)}]$	.93	.095	$y'=20/[1+e^{(2.06-0.11t)}]$	
Low alternative[50]	....	4.83					
Total (full-time and part-time)							
Public 4-year institutions[51]	....	65.6					
Private 4-year institutions[51]	....	79.7					
Public 2-year institutions[51]	....	47.0					
Private 4-year institutions[51]	....	81.0					
Women							
Full-time[47]	....	....	$y'=0.82+0.33t$	.96	.17	$y'=1.03+0.31t$	
Public 4-year institutions[48]	....	24,000					
Private 4-year institutions[48]	....	6,000					
Public 2-year institutions	....	....	....	......	......	....	(49)
Private 2-year institutions[48]	....	12,000					
High alternative[47]	....	....	$y'=20/[1+e^{(2.86-0.17t)}]$	.95	.10	$y'=20/[1+e^{(2.88-0.17t)}]$	
Low alternative[50]	....	3.55					
Total (full-time and part-time)							
Public 4-year institutions[51]	....	68.6					
Private 4-year institutions[51]	....	77.1					
Public 2-year institutions[51]	....	43.7					
Private 2-year institutions[51]	....	87.0					
Full-time-equivalent degree-credit fall enrollment	9						
Public 4-year institutions[52]		38.3					
Private 4-year institutions[52]		38.5					
Public 2-year institutions[52]		36.3					
Private 2-year institutions[52]		42.8					

Table A-1.--Methodology (Chapter II)—Continued

	Text table number	Projection method					
		Constant	Trend				
			Least squares equation (y=percent; t=year; 1965=1)[1]	Index of determination	Standard error	Adjusted equation[2]	Other
Full-time-equivalent non-degree-credit fall enrollment	9						
Public 4-year institutions[53]	....	40.7					
Private 4-year institutions[53]	....	40.8					
Public 2-year institutions[53]	....	38.3					
Private 2-year institutions[53]	....	40.0					
First-time degree-credit fall enrollment	11-13						
Men							
Full-time[54]	....	....	y'=34.30+0.20t				
Public 4-year institutions[55]	....	45.8					
Private 4-year institutions[55]	....	24.2					
Public 2-year institutions[55]	....	27.6					
Private 2-year institutions[55]	....	2.4					
High alternative[56]	....	....	y'=30.70+0.65t				
Low alternative[57]	....	35.9					
Total (full-time and part-time)							
Public 4-year institutions[58]	....	89.1					
Private 4-year institutions[58]	....	91.6					
Public 2-year institutions[58]	....	57.6					
Private 2-year institutions[58]	....	76.0					
Women							
Full-time[54]	....	....	y'=31.20+0.20t				
Public 4-year institutions[55]	....	49.0					
Private 4-year institutions[59]	....	....	y'=26.27-0.25t	0.85	0.28	y'=26.21-0.25t	
Public 2-year institutions	....	....	....	......	......	....	(60)
Private 2-year institutions[55]	....	3.1					
High alternative[61]	....	....	y'=27.60+0.65t				
Low alternative[57]	....	32.8					
Total (full-time and part-time)							
Public 4-year institutions[58]	....	87.4					
Private 4-year institutions[58]	....	90.2					
Public 2-year institutions[58]	....	49.2					
Private 2-year institutions[58]	....	84.0					

[1] If a computer is not available, tables of exponential functions, which are found in most books of mathematical tables, may be used to simplify computations of projected values from logistic growth curves.

[2] Unless otherwise noted, adjusted by relocating curve through last observed point and 1985 point of fitted curve.

[3] Total public kindergarten and nursery school enrollment less kindergarten enrollment in regular public day schools.

[4] y=percent 3-year-olds enrolled in public kindergarten and nursery schools is of population aged 3 years.

[5] y=percent 4-year-olds enrolled in public kindergarten and nursery schools is of population aged 4 years.

[6] y=percent 5-year-olds enrolled in public kindergarten and nursery schools is of population aged 5 years.

[7] y=percent 6-year-olds enrolled in public kindergarten and nursery schools is of population aged 6 years.

[8] Total nonpublic kindergarten and nursery schools enrollment less kindergarten enrollment in regular nonpublic day schools.

[9] y=percent 3-year-olds enrolled in private kindergarten and nursery schools is of population aged 3 years.

[10] y=percent 4-year-olds enrolled in private kindergarten and nursery schools is of population aged 4 years.

[11] Constant=percent in 1974 that 5-year-olds enrolled in private kindergartens and nursery schools were of population aged 5 years.

[12] Constant=percent in 1974 that 6-year-olds enrolled in private kindergartens and nursery schools were of population aged 6 years.

[13] y=percent in 1975 that regular public kindergarten and nursery enrollment was of total public kindergarten and nursery enrollment.

[14] Constant=percent in 1974 that 1st-grade enrollment was of population aged 6 years.

[15] Constant=1970-to-1975 average percent that grade 2 was of grade 1 in preceding year.

[16] Constnat=1970-to-1975 average percent that grade 3 was of grade 2 in preceding year.

[17] Constant=1970-to-1975 average percent that grade 4 was of grade 3 in preceding year.

[18] Constant=1970-to-1975 average percent that grade 5 was of grade 4 in preceding year.

[19] Constant=1970-to-1975 average percent that grade 6 was of grade 5 in preceding year.

[20] Constant=1970-to-1975 average percent that grade 7 was of grade 6 in preceding year.

[21] Constant=1970-to-1975 average percent that grade 8 was of grade 7 in preceding year.

[22] Constant=1970-to-1975 average percent that grade 9 was of grade 8 in preceding year.

[23] Constant=1970-to-1975 average percent that grade 10 was of grade 9 in preceding year.

[24] Constant=1970-to-1975 average percent that grade 11 was of grade 10 in preceding year.

[25] Constant=1970-to-1975 average percent that grade 12 was of grade 11 in preceding year.

[26] y=percent elementary ungraded enrollment is of population aged 5 to 13.

[27] Constant=1975 percent secondary ungraded enrollment was of population aged 14 to 17.

[28] Constant=postgraduate enrollment in 1975.

[29] Constant=1975 percent that 7th and 8th grades organized as secondary were of total 7th and 8th grades.

[30] Constant=nonpublic elementary enrollment in 1975.

[31] Constant=nonpublic secondary enrollment in 1975.

[32] First year of data in 1968 (t=1 in 1968).

[33] Constant=percent in 1975 that full-time undergraduate and unclassified enrollment was of population aged 18-21.

[34] Constant=percent in 1975 that full-time undergraduate and unclassified enrollment in this category was of total undergraduate and unclassified enrollment in 1975.

[35] 100 percent less the percentage of full-time undergraduate and unclassified enrollment in the three other categories of institutions.

[36] y=percent that full-time undergraduate and unclassified enrollment in this category is of total undergraduate and unclassified enrollment.

[37] y'=percent that full-time undergraduate and unclassified enrollment is of population aged 18-21. This equation was not determined by the least squares technique, but was determined based on the assumption that the percent that full-time undergraduate and unclassified enrollment is of the population aged 18-21 will increase to the 1970 and 1971 rate of 38.7 percent by 1985.

[38] y'=percent that full-time undergraduate and unclassified enrollment is of the population aged 18-21.

[39] y=percent that full-time undergraduate and unclassified enrollment is of total undergraduate and unclassified enrollment.

[40] y=percent that full-time graduate enrollment is of full-time undergraduate and unclassified enrollment in 4-year institutions.

[41] y=percent that graduate enrollment is of total graduate enrollment.

[42] Constant=percent in 1975 that full-time graduate enrollment was of total graduate enrollment.

[43] Constant=percent that first-professional degrees (table 21) were of first-professional enrollment 2 years earlier.

[44] Constant=percent that full-time first-professional enrollment in this category was of total first-professional enrollment in 1975.

[45] Constant=percent in 1975 that full-time first-professional enrollment was of total first-professional enrollment.

[46] y=percent that full-time undergraduate and unclassified enrollment is of population aged 18-21.

[47] y=percent that full-time non-degree-credit enrollment is of population aged 18-21.

[48] Constant=percent in 1975 that full-time non-degree-credit enrollment in this category was of total full-time non-degree-credit enrollment.

[49] Total full-time non-degree-credit enrollment less the full-time non-degree-credit in the three other categories of institutions.

[50] Constant=percent that full-time non-degree-credit enrollment is of population aged 18-21.

[51] Constant=percent in 1975 in the category that full-time non-degree-credit enrollment was of total non-degree-credit enrollment.

[52] Constant=percent in 1975 in this category that full-time equivalent of part-time degree-credit enrollment was of part-time degree-credit enrollment.

[53] Constant=percent in 1975 in this category that full-time equivalent of part-time non-degree-credit enrollment was of part-time non-degree-credit enrollment.

[54] y'=percent that full-time first-time degree-credit enrollment is of population aged 18 at nearest birthday. This equation was not determined by the least squares technique, but was based on the assumption that the percent would increase 0.2 percent per year through 1985. The 0.2 percent annual increase is the average for 1973 to 1975.

[55] Constant=percent in 1975 that full-time first-time degree-credit enrollment in this category is of total full-time first-time degree-credit enrollment.

[56] y'=percent that full-time first-time degree-credit enrollment is of population aged 18 at nearest birthday. This equation was not determined by the least squares technique, but was based on the assumption that the percent would increase to the high level of 1969 by 1985.

[57] Constant=percent in 1975 that full-time first-time opening fall degree-credit enrollment was of population aged 18 at nearest birthday.

[58] Constant=percent in 1974 in this category that full-time first-time degree-credit enrollment was of total first-time degree-credit enrollment.

[59] y=percent that full-time first-time degree-credit enrollment in this category is of total full-time first-time degree-credit enrollment.

[60] 100 percent less the percentage of enrollment in the three other categories of institutions.

[61] y=percent that full-time first-time degree-credit enrollment is of population aged 18 at nearest birthday. This equation was not determined by the least squares technique, but was based on the assumption that women would increase at the same rate as men (high alternative).

Table A-2.--Methodology (Chapter III)

	Text table number	Projection method					
			Trend				
		Constant	Least squares equation (y=percent; t=year; 1964-65=1)[1]	Index of determination	Standard error	Adjusted equation[2]	Other
High school graduates:	15						
Public[3]							
Men	....	64.9					
Women	....	68.7					
Nonpublic[4]	....	[5] 48.1					
Bachelor's degrees conferred on men[6]	16	52.16					
Selected field[7]	18						
Social sciences[8]	....	....	$y'=10/[1-e^{-(0.571+0.56t)}]$	.93	0.027	$y'=10/[1-e^{-(0.610+0.053t)}]$	
Psychology[9]	....	4.79					
Public affairs and services[8]	....	....	$y'=7/[1+e^{(2.23-0.40t)}]$	.99	0.055	$y'=7/[1+e^{(2.28-0.41t)}]$	
Library sciences[9]	....	0.02					
Architecture and environmental design[8]	....	....	$y'=0.955+0.077t$	.98	.020	$y'=0.970+0.076t$	
Fine and applied arts[9]	....	3.08					
Foreign languages[10]	....	....	$y'=0.5[1-e^{-(0.256+0.058t)}]$	0.88	0.074	$y'=0.5/[1-e^{-(0.349+0.054t)}]$	
Communications[8]	....	....	$y'=1.21+0.20t$	0.97	.061	$y'=1.29+0.20t$	
Letters[8]	....	....	$y'=2/[1-e^{-(0.362+0.031t)}]$	0.94	.014	$y'=2/[1-e^{-(0.375+0.030t)}]$	
Mathematics and Statistics[10]	....	....	$y'=1.0/[1-e^{-(0.146+0.037t)}]$	.87	.051	$y'=1.0/[1-e^{-0.336+0.028t)}]$	
Computer and information sciences[10]	....	....	$y'=-0.176+0.090t$	.96	.068	$y'=-0.188+0.091t$	
Engineering	....	....	....	....	....	....	(11)
Physical science[12]	....	3.51					
Biological sciences[9]	....	6.86					
Agriculture and natural resources[10]	....	....	$y'=2.439+0.031t$	.53	.103	$y'=2.835+0.013t$	
Health professions[10]	....	....	$y'=1.061+0.060t$	.41	.249	$y'=1.961+0.019t$	
Accounting	....	....	....	....	....	....	(13)
Other business and management[9]	....	17.15					
Education[8]	....	....	$y'=10.06-0.19t$	.43	.40	$y'=9.63-0.16t$	
Other[9]	....	4.21					
Bachelor's degrees conferred on women[6]	16	52.41					
Selected fields[7]	18						
Social sciences[8]	....	....	$y'=6/[1-e^{-(0.413+0.046t)}]$	.98	0.12	$y'=6/[1-e^{-(0.433+0.044t)}]$	
Psychology[9]	....	6.41					
Public affairs and services[8]	....	....	$y'=7/[1-e^{(1.86-0.32t)}]$	.99	.028	$y'=7/1-e^{(1.86-0.32t)}]$	
Library sciences[9]	....	0.24					
Architectural and environmental design[8]	....	....	$y'=0.126+0.040t$	.96	.015	$y'=0.146+0.039t$	

Table A-2.--Methodology (Chapter III)—Continued

	Projection method						
	Text table number	Trend					
		Constant	Least squares equation (y=percent; t=year; 1964-65=1)[1]	Index of determination	Standard error	Adjusted equation[2]	Other
Fine and applied arts[9]	....	6.04					
Foreign languages[10]			$y'=1.5/[1-e^{-(0.290+0.027t)}]$	.81	.046	$y'=1.5/[1-e^{-(0.36+0.024t)}]$	
Communications[8]	....	....	$y'=0.76+0.21t$	.96	.081	$y'=0.86+0.20t$	
Letters[10]	....	....	$y'=14.43-0.46t$	.70	1.06	$y'=11.51-0.33t$	
Mathematics and statistics[10]			$y'=1/[1-e^{-(0.281-0.035t)}]$	.74	.073	$y'=1/[1-e^{-(0.554+0.022t)}]$	
Computer and information sciences[10]	....	....	$y'=0.056+0.023t$	.93	.022	$y'=0.002+0.021t$	
Engineering	....	....	....	......	......	....	(11)
Physical sciences[10]	....	....	$y'=0.752+0.024t$	0.46	0.047	$y'=0.807+0.021t$	
Biological sciences[8]	....	....	$y'=8/[1+e^{(0.87-0.17t)}]$	.91	.096	$y'=8/1+e^{(0.76-0.16t)}]$	
Agriculture and natural resources[8]	....	....	$y'=-0.048+0.041t$	.74	.086	$y'=0.324+0.024t$	
Health professions	....	....	....	......	......	....	(14)
Accounting	....	....	....	......	......	....	(13)
Other business and management[10]	....	....	$y'=1.516+0.148t$	.71	.330	$y'=2.95+0.083t$	
Education[10]	....	....	$y'=40.77-0.82t$	.76	1.59	$y'=35.80-0.59t$	
Other[9]	....	7.00					
Master's degrees conferred on men[15]	16		$y'=63/[1+e^{-(0.346+0.085t)}]$	.93	.083	$y'=65/[1+e^{-(0.328+0.086t)}]$	
Selected fields[7]	19						
Social sciences[16]	....	....	$y'=10.36-0.20t$	.75	.40	$y'=9.49-0.16t$	
Psychology[17]	....	2.50					
Public affairs and services[16]	....	....	$y'=1.40+0.28t$	.84	.43	$y'=303+0.20t$	
Library sciences[17]	....	1.06					
Architecture and environmental design[16]	....	....	$y'=0.437+0.091t$	0.97	0.059	$y'=0.452+0.091t$	
Fine and applied arts[17]	....	2.75					
Foreign languages[16]	....	....	$y'=0.5/[1-e^{-(0.177+0.063t)}]$	.81	.106	$y'=0.5/[1-e^{-(0.510+0.047t)}]$	
Communication[17]	....	1.00					
Letters[16]	....	....	$y'=4.417-0.106t$	.84	.165	$y'=3.961-0.085t$	
Mathematics and statistics[16]	....	....	$y'=1/[1-e^{-(0.143+0.051t)}]$	.91	.057	$y'=1/[1-e^{-(0.377+0.039t)}]$	
Computer and information sciences[17]	....	1.21					
Engineering[16]	....	....	$y'=5/[1-e^{-(0.330+0.037t)}]$	.95	.031	$y'=5/[1-e^{-(0.410+0.033t)}]$	
Physical sciences[16]	....	....	$y'=2/[1-e^{-(0.382+0.054t)}]$	.96	.041	$y'=2/[1-e^{-(0.526+0.047t)}]$	
Biological sciences[17]	....	2.84					
Agriculture and natural resources[17]	....	1.67					
Health professions[16]	....	....	$y'=1.432+0.086t$	.74	.177	$y'=1.747+0.071t$	
Accounting	....	....	....	......	......	....	(18)

Other business and management[16]	....	....	$y'=30/[1+e^{(0.67-0.13t)}]$	0.89	.16	$y'=30/[1+e^{(0.91-0.14t)}]$
Education[17]	....	28.04				
Other[17]	....	3.37				
Master's degrees conferred on women[19]	16	50.00				
Selected fields[7]	19					
Social sciences[16]	....	....	$y'=6.25-0.15t$	.70	.34	$y'=5.52-0.11t$
Psychology[16]	....	....	$y'=1.482+0.064t$	.72	.140	$y'=1.732+0.053t$
Public affairs and services[17]	....	5.18				
Library sciences[16]	....	....	$y'=6.883-0.142t$	.65	.365	$y'=5.933-0.097t$
Architecture and environmental design[16]	....	....	$y'=-0.017+0.040t$	.95	.031	$y'=0.046+0.037t$
Fine and applied arts[17]	....	2.99				
Foreign languages[16]	....	....	$y'=1.25/[1-e^{-(0.181+0.058t)}]$	.75	.119	$y'=1.25/[1-e^{-(0.601+0.038t)}]$
Communications[16]	....	....	$y'=0.074+0.075t$	.89	.093	$y'=0.085+0.074t$
Letters[16]	....	....	$y'=9.61-0.34t$	.81	.56	$y'=8.37-0.28t$
Mathematics and statistics[16]	....	....	$y'=0.5/[1-e^{-(0.158+0.033t)}]$	.83	.053	$y'=0.5/[1-e^{-(0.344+0.025t)}]$
Computer and information sciences[16]	....	....	$y'=-0.020+0.027t$	0.96	0.020	$y'=-0.049+0.028t$
Engineering[17]	....	0.29				
Physical sciences[16]	....	....	$y'=0.35/[1-e^{-(0.277+0.037)}]$	.85	.054	$y'=0.35/[1-e^{-(0.493+0.027t)}]$
Biological sciences[16]	....	....	$y'=1/[1-e^{-(0.374+0.052t)}]$	.82	.084	$y'=1/[1-e^{-(0.701+0.036t)}]$
Agriculture and natural resources[16]	....	....	$y'=0.104+0.013t$	.77	.024	$y'=0.184+0.009t$
Health professions[16]	....	....	$y'=0.053+0.01t$	.74	.022	$y'=0.143+0.006t$
Other business and commerce[16]	....	....	$y'=0.259+0.131t$	.82	.211	$y'=1.162+0.088t$
Education[17]	....	56.90				
Other[17]	....	3.44				
Doctor's (except first-professional) degrees conferred on men[20]	16		$y'=5/[1-e^{-(0.340+0.039t)}]$	.81	.050	$y'=t/[1-e^{-(0.446+0.034t)}]$
Selected fields[7]	20					
Social sciences[21]	....	12.97, 11.93				
Psychology[22]	....	23.58	$y'=3.75+0.28t$	0.85	0.61	$y'=2.77+0.32t$
Public affairs and services[22]	....	3.14	$y'=-0.019+0.094t$	.77	.27	$y'=-0.422+0.112t$
Library sciences[23]	....	....	$y'=0.115+0.006t$	.42	.29	
Architecture and environmental design[24]	....		$y'=-034+0.028t$	.92	.047	
Fine and applied arts[25]	....	1.66				
Foreign languages[24]	....	11.29	$y'=0.5/[1-e^{-(0.172+0.024t)}]$	.65	.101	$y'=2.544-0.077t$
Communications[25]	....	0.44				
Letters[23]	....	....	$y'=7.22-0.20t$	.93	.19	
Mathematics and statistics[22]	....	9.03	$y'=1/[1-e^{-(0.140+0.027t)}]$	.83	.065	$y'=4.65+0.13t$
Computer and information sciences[22]	....	5.57	$y'=-0.021+0.068t$	.97	.057	
Engineering[22]	....	8.42	$y'=15.83-0.42t$	.88	.83	
Physical sciences[22]	....	22.92	$y'=18.82-0.54t$	.95	.65	
Biological sciences[26]	....	23.63, 12.58				

Table A-2.--Methodology (Chapter III)—Continued

	Text table number	Projection method					
		Constant	Trend				Other
			Least squares equation (y=percent; t=year; 1964-65=1)[1]	Index of determination	Standard error	Adjusted equation[2]	
Agriculture and natural resources[27]	...	25.59	$y'=3.21+0.12t$	.53	.54	$y'=1.80+0.16t$	
Health professions[22]	...	11.52	$y'=0.62+0.13t$	0.81	0.33		
Accounting[22]	...	1.97	$y'=0.136+0.012t$	.60	.049		
Other business and management[22]		1.81	$y'=1.48+0.18t$	.92	.28		
Education[28]	...	....	$y'=5/[1-e^{-(0.365+0.057t)}]$	.84	.052	$y'=5/[1-e^{-(0.471+0.057t)}]$	
Other[25]	...	4.13	$y'=15.58+0.32t$	.68	1.39		
Doctor's (except first-professional) degrees conferred on women[28]	16		$y'=3/[1-e^{-(0.899+0.027t)}]$	.54	.066	$y'=3/[1-e^{-(1.042+0.019t)}]$	
Selected fields[7]	20						
Social sciences[27]	...	7.71	$y'=11.425-0.040t$	.032	1.22	$y'=14.716-0.190t$	
Psychology[22]	...	16.80	$y'=8.24+0.25t$	.74	.79	$y'=6.96-0.31t$	
Public affairs and services[29]		1, 08, 0.96					
Library sciences[25]	...	0.32					
Architecture and environmental design[30]		10					
Fine and applied arts[25]	...	2.79					
Foreign languages[24]	...	7.15	$y'=7.28-0.19t$	.72	.71	$y'=8.06-0.23t$	
Communication[25]	...	0.63					
Letters[24]	...	7.92	$y'=11.748+0.031t$	.015	1.441	$y'=10.882+0.070t$	
Mathematics and statistics[22]	...	2.64	$y'=0.5/[1-e^{-(0.041+0.045t)}]$	.85	.101	$y'=2.28-0.07t$	
Computer and information sciences[30]	20						
Engineering[22]	...	13.33	$y'=0.078+0.086t$	.68	.309	$y'=-0.19+0.10t$	
Physical sciences[22]	...	13.17	$y'=2/[1-e^{-(0.203+0.047t)}]$	.93	.068	$y'=5.46+0.12t$	
Biological sciences[22]	...	14.54	$y'=14.72-0.36t$	.74	1.09		
Agriculture and natural resources[27]	...	12.55	$y'=0.349+0.032t$	.36	.235	$y'=-0.210+0.060t$	
Health profession[27]		5.09	$y'=-0.31+0.31t$	.85	.73	$y'=-1.740+0.38t$	
Accounting[30]	...	10					
Other business and management[2]	...	1.88	$y'=0.017+0.083t$	.64	.32	$y'=-0.810+0.12t$	
Education[31]		3.51	$y'=26.15+0.65t$	.75	2.38	$y'=21.04+0.80t$	
Other[32]	...	9.82	$y'=2.79+0.026t$	.078	.508	$y'=2.480+0.040t$	
First-professional degrees conferred, total[33]	16						
Selected fields	21						
Medicine	...	....	...	...	...	...	(34)
Dentistry	...	....	...	...	...	...	(34)

Other health professions	....	....	....	......	....	(34)
Law[35]	....	88.37				
Theology	....	....	....	......	....	(36)
Other	....	....	....	......	....	(36)
Women	16	....	....	......	....	(37)
Medicine[38]	....	....	y'=8.00+1.00t			
Dentistry[38]	....	....	y'=5.00+0.50t			
Other health professions[38]	....	....	y'=3.00+1.00t			
Law[38]	....	....	y'=21.00+0.50t			
Theology[39]	....	....	y'=0.20+0.10t			
Other[40]	....	120				
Men	16					
Theology[39]	....	1.05				
Other[40]	....	1,000				

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[1] If a computer is not available, tables of exponential functions, which are found in most books of mathematical tables, may be used to simplify the computation of a projected value from a logistic growth curve.

[2] Adjusted by relocating curve through last observed point and 1984-85 point of fitted curve.

[3] Constant=1972-73 to 1974-75 average percent that public high school graduates were of population averaging 18 years of age for men and women separately.

[4] Assumes approximately no change in number of nonpublic high school graduates through 1984-85.

[5] Constant=percent that boys were of nonpublic high school graduates in 1964-65.

[6] Constant=percent in 1974-75 that bachelor's degrees were of first-time degree-credit enrollment 4 years earlier.

[7] Projections of degrees by field of study are based primarily on the assumption that, for each field, the percentage that degrees in the field are of degrees in all fields will follow past trends. However, when the projected percentages for each field are summed over all fields, the sum for each projected year does not usually add to 100 percent. Therefore, for each year, the projected percentages for individual fields that are obtained from the equations in this table are prorated so that they add to 100 percent.

[8] y=percent that bachelor's degrees in this field are of all bachelor's degrees (t=1 in 1970-71).

[9] Constant=percent in 1974-75 that bachelor's degrees in this field were of all bachelor's degrees.

[10] y=percent that bachelor's degrees in this field are of all bachelor's degrees.

[11] Projections of bachelor's degrees in engineering through 1978-79 are based on data from the Engineers Joint Council on undergraduate engineering enrollment by year enrolled. Projections for 1979-80 through 1985-86 are based primarily on the assumption that the percentage that bachelor's degrees in engineering are of all bachelor's degrees will remain constant at the increase 0.05 percent per year for men and 0.10 percent per year for women above the 1978-79 projected level through 1985-86.

[12] Constant=the 1970-71 to 1974-75 average percent that degrees in this field were of all bachelor's degrees.

[13] Projections through 1979-80 are based on projections from the American Institution of Certified Public Accounts. Projections from 1980-81 through 1985-86 are based primarily on the assumption that the percentage that bachelor's degrees in accounting are of all bachelor's degrees will remain constant at the 1979-80 projected level for men and increase 0.1 percent per year for women through 1985-86.

[14] Projections of degrees in health professions are based on data on the projected number of nurses supplied by the Bureau of Health Manpower, Health Resources Administration.

[15] y=percent that master's degrees are of the projected average first-year enrollment for advanced degrees, 1 and 2 years earlier.

[16] y=percent that master's degrees in this field are of all master's degrees.

[17] Constant=percent in 1974-75 that master's degrees in this field were of all master's degrees.

[18] It was assumed that master's degrees in this field will increase by 0.1 percent of total master's degrees each year through 1985-86.

[19] Constant=percent in 1974-75 that master's degrees were of the average first-year enrollment for advanced degrees, 1 and 2 years earlier.

[20] y=percent that doctor's degrees are of first-year enrollment for advanced degrees averaging 7 and 8 years earlier.

[21] First constant=percent or approximate percent that earned degrees in this field in 1974-75 were of first-year enrollment for advanced degrees in the same field 7 years earlier. This constant was used to determine the 1975-76 to 1981-82 projections. Second constant=percent that projected earned degrees in this field in 1981-82 are of total doctor's degrees in 1981-82. This constant was used to determine the 1982-83 to 1985-86 projections.

[22] Constant=percent or approximate percent that earned degrees in this field in 1974-75 were of first-year enrollment for advanced degrees in the same field 6 years earlier. This constant was used to determine the unadjusted 1975-76 to 1980-81 projections. y=percent that earned degrees in this field are of total doctor's degrees. This equation was used to determine the 1975-76 to 1980-81 adjusted projections.

[23] y=percent that degrees in this field are of all doctor's degrees.

[24] Constant=percent or approximate percent that earned degrees in this field in 1974-75 were of first-year enrollment for advanced degrees in the same field, 8 years earlier. This constant was used to determine the unadjusted 1975-76 to 1982-83 projections. y=percent that projected earned degrees in this field are of

total doctor's degrees. This equation was used to determine the 1975-76 to 1982-83 adjusted projections and the 1983-84 to 1985-86 projections.

[25] Constant=percent in 1974-75 that doctor's degrees in this field were of all doctor's degrees.

[26] First constant=percent or approximate percent that earned degrees in this field in 1974-75 were of first-year enrollment for advanced degrees in the same field, 6 years earlier. This constant was used to determine the 1975-76 to 1980-81 projections. Second constant=percent in 1981 that projected earned degrees in this field are of total doctor's degrees. This constant was used to determine the 1981-82 to 1985-86 projections.

[27] First constant=percent or approximate percent that earned degrees in this field in 1974-75 were of first-year enrollment for advanced degrees in the same field, 7 years earlier. This constant was used to determine the unadjusted 1975-76 to 1981-82 projections. y=percent that earned degrees in this field are of total doctor's degrees. This equation was used to determine the adjusted 1975-76 to 1981-82 projections and the 1982-83 to 1985-86 projections.

[28] First y=percent that earned degrees in this field are of first-year enrollment for advanced degrees in the same field 10 years ealrier. This equation was used to determine the 1975-76 to 1984-85 unadjusted projections. Second y=percent that earned degrees in this field are of total doctor's degrees. This equation was used to determine the adjusted projections for 1975-76 to 1984-85 and the projection for 1985-86.

[29] First constant=percent that earned degrees in this field in 1974-75 were of first-year enrollment for advanced degrees in the same field, 7 years earlier. This constant was used to determine the 1975-76 to 1981-82 unadjusted projections. Second constant=percent that earned degrees in this field are of total doctor's degrees. This constant was used to determine the adjusted 1975-76 to 1981-82 projections and the 1982-83 to 1985-86 projections.

[30] Constant=number of doctor's degrees projected in this field through 1985-86.

[31] Constant=approximately the percent that earned degrees in this field in 1974-75 were of first-year enrollment for advanced degrees in the same field, 11 years earlier. This constant was used to determine the unadjusted 1975-76 to 1985-86 projections. y=percent that earned degrees in this field are of total doctor's degrees. This equation was used to determine the adjusted 1975-76 to 1985-86 projections.

[32] Constant=percent in 1974-75 that doctor's degrees in "other" fields were of first-year enrollment for advanced degrees in home economics 8 years earlier. This constant was used to obtain the unadjusted projections for 1975-76 to 1982-83. y=percent that doctor's degrees in "other" fields are of all doctor's degrees. This equation was used to determine the 1975-76 to 1982-83 unadjusted projections and projections for 1984-85 and 1985-86.

[33] Projections for 1975-76 to 1985-86 were obtained by summing the projected degrees of all the individual fields.

[34] These projections were made by the Health Resources Administration, Bureau of Health Manpower.

[35] y=percent that law degrees are of first-year law students 3 years earlier. Projections through 1985-86 are based on unpublished projections of first-year law students provided by the American Bar Association.

[36] The number of degrees granted in theology was projected by summing the separate projections for men and women.

[37] The total number of degrees granted to women was projected by summing the projected degrees granted to women in the individual fields.

[38] y=percent that first-professional degrees in this field granted to women are of all first-professional degrees in this field. This equation was used to project the percentage of women for 1979-80 through 1985-86. Projections for 1975-76 through 1978-79 are based on the percentage that women made up of first-year enrollment for advanced degrees in this field 4 years earlier.

[39] y=percent that first-professional degrees in the field are of all bachelor's degrees conferred 3 years earlier.

[40] Constant=number of first-professional degrees projected in this field through 1985-86.

Table A-3.--Methodology (Chapter IV)

	Text table number	Projection method					
		Constant	Trend				Other
			Least squares equation (y=percent; t=year; 1965=1)[1]	Index of determination	Standard error	Adjusted equation[2]	
Classroom teachers in regular day schools	22						
Public elementary	....	....	....	......	......	....	(3)
Public secondary	....	....	....	......	......	....	(3)
Nonpublic elementary	....	....	....	......	......	....	(3)
Nonpublic secondary	....	....	....	......	......	....	(3)
Pupil-teacher ratios in regular elementary and secondary day schools	23						
Public elementary[4]	....	....	$y'=15/[1-e^{-(0.739+0.035t)}]$	.94	.031	$y'=15/[1-e^{-(0.841+0.030t)}]$	
Public secondary[4]	....	....	$y'=15/[1-e^{-(1.238+0.034t)}]$	.93	.033	$y'=15/[1-e^{-(1.213+0.035t)}]$	
Nonpublic elementary[4]	....	....	$y'=18/[1-e^{-(0.623+0.091t)}]$	.98	.049	$y'=18/[1-e^{-(0.497+0.096t)}]$	
Nonpublic secondary[5]	....	....	$y'=14/[1-e^{-(1.29+0.10t)}]$	.93	.10	$y'=14/[1-e^{-(1.12+0.11t)}]$	
Demand for classroom teachers in public regular day schools	24						
For enrollment increase	....	....	....	......	......	....	(5)
For reduction of pupil-teacher ratio	....	....	....	......	......	....	(6)
For teacher turnover[7]	....	6.0					
High alternative[7]	24a	8.0					
Low alternative[7]	24b	4.8					
Demand for classroom teachers in nonpublic regular day schools	25						
For enrollment increase	....	....	....	......	......	....	(5)
For reduction of pupil-teacher ratio	....	....	....	......	......	....	(6)
For teacher turnover[7]	....	4.0					
Instructional staff in regular elementary and secondary day schools	26						
Public[8]	....	111.6					
Nonpublic	....	....	....	......	......	.(9)	
Full-time equivalent instructional staff for resident courses	28						
Public 4-year institutions[10]	....	....	$y'=14.56+0.13t$	0.86	0.12	$y'=14.79+0.12t$	
Private 4-year institutions[10]	....	....	$y'=11.11+0.20t$	.57	.41	$y'=11.80+0.16t$	
Public 2-year institutions[11]	....	20.73					
Private 2-year institutions[11]	....	17.18					

Table A-3.–Methodology (Chapter IV)–Continued

	Text table number	Projection method					
		Constant	Trend				
			Least squares equation (y=percent; t=year; 1965=1)[1]	Index of determination	Standard error	Adjusted equation[2]	Other
Full-time equivalent instructor or above							
Public 4-year institutions[1,2]	....	87.6					
Private 4-year institutions[1,2]	....	93.1					
Public 2-year institutions[1,2]	....	99.0					
Private 2-year institutions[1,2]	....	98.9					
Full-time instructor or above	27,28						
Public 4-year-institutions[1,3]	....	95.3					
Private 4-year institutions[1,3]	....	89.0					
Public 2-year institutions[1,3]	....	84.2					
Private 2-year institutions[1,3]	....	83.0					
Part-time instructor or above	27						
Public 4-year institutions[1,4]	....	29.6					
Private 4-year institutions[1,4]	....	32.6					
Public 2-year institutions[1,4]	....	30.1					
Private 2-year institutions[1,4]	....	40.7					
Full-time junior instructional staff	27,28						
Public 4-year institutions[1,5]	....	16.5					
Private 4-year institutions[1,5]	....	30.8					
Public 2-year institutions[1,5]	....	81.3					
Private 2-year institutions[1,5]	....	86.9					
Part-time junior instructional staff	27						
Public 4-year institutions[1,6]	....	37.3					
Private 4-year institutions[1,6]	....	37.5					
Public 2-year institutions[1,6]	....	39.2					
Private 2-year institutions[1,6]	....	29.6					
Total demand for estimated full-time-equivalent							
Instructional staff in institutions of higher education	29						
Demand for additional instructional staff:							
For increased enrollment and changes of student staff ratio	....	....	....	....	......	....	(17)
For replacement[1,8]	....	6.0					
Alternative[1,8]	29a	4.5					

[1] If a computer is not available, tables of exponential functions, which are found in most books of mathematical tables, may be used to simplify computations of projected values from logistical growth curves.

[2] Adjusted by relocating curve through last observed point and 1985 point on fitted curve.

[3] Projected enrollment (table 4) divided by projected pupil-teacher ratio (table 28) calculated separately for each type of school by control and level.

[4] y=ratio of number of pupils to number of teachers.

[5] Total teacher demand in a given year less total teacher demand in the previous year less the number of teachers needed for pupil-teacher ratio changes.

[6] The enrollment divided by the pupil-teacher ratio of a given year less the same enrollment divided by the pupil-teacher ratio of the previous year.

[7] Constant=percent of total teacher demand in each previous year.

[8] Constant=1973 to 1975 average ratio that instructional staff was to classroom teachers (staff-teacher ratio times projected classroom teacher=projected instructional staff).

[9] Number of instructional staff assumed same as number of classroom teachers.

[10] y=ratio of number of full-time-equivalent degree-credit and non-degree-credit students to full-time-equivalent instructional staff (instructor or above and junior instructional staff).

[11] Constant=ratio of number of full-time-equivalent degree-credit and non-degree-credit students to full-time equivalent instructional staff (instructor or above and junior instructional staff).

[12] Constant=percent in 1972 that full-time-equivalent instructor or above was of total full-time-equivalent instructional staff.

[13] Constant=percent in 1972 that full-time instructor or above was of full-time-equivalent instructor or above.

[14] Constant=percent in 1972 that the full-time-equivalent of part-time instructor or above was of part-time insttructor or above.

[15] Constant=percent in 1972 that full-time junior instructional staff was of full-time-equivalent junior instructional staff.

[16] Constant=percent in 1972 that the full-time-equivalent of part-time junior instructional staff was of part-time junior instructional staff.

[17] Increase in total full-time equivalents employed over each previous year.

[18] Constant=percent of total full-time equivalents employed in previous year.

NOTE.––Sources of data and assumptions on which projections were based are given in text table footnotes.

Table A-4.--Methodology (Chapter V)

	Text table number	Projection method					
		Constant	Trend				
			Least squares equation (t=years, 1965-66=1)	Index of determination	Standard error	Adjusted equation	Other
Expenditures for education by elementary and secondary schools	31,32						
Current expenditures:							
Public	......	....	....	......	......	....	(1)
Nonpublic	......	....	....	......	......	....	(2)
Capital Outlay:							
Public	......	....	....	......	......	....	(3)
Nonpublic	......	....	....	......	......	....	(4)
Interest:							
Public	......	....	....	......	......	....	(5)
Nonpublic	......	....	....	......	......	....	(6)
Expenditures for education by institutions of higher education	31,32						
Current expenditures:							
Public	......	....	....	......	......	....	(7)
Nonpublic	......	....	....	......	......	....	(7)
Current expenditures of public school systems	33						
Capital outlay:							
Public	......	....	....	......	......	....	(8)
Nonpublic	......	....	....	......	......	....	(8)
Average daily attendance[9]		92					
Current expenditure allocated to pupil costs per pupil in average daily attendance:							
Total[10]	......	....	$y'=\$5,000/[1+e^{(1.492-.057t)}]$	0.92	$0.060	$y'=\$5,000/[1+e^{(1.682-0.066t)}]$	(11)
Current expenditures for all programs[12]	......	1.03					
Expenditures for salaries of classroom teachers in public elementary and secondary schools	34						
Average annual salary[13]	......	....	$y'=\$11,611+\$126(t)$	0.72	$424	$y'=\$10,468+\$180(t)$	
Total salary	......	....	....	......	......	....	(14)
Capital outlay (school year)	35	....	$y'=\$1,000/[1-e^{-(.115+.007t)}]$	0.65	$0.019	$y'=\$1,000/[1-e^{-(.085+.009t)}]$	
Expenditures for interest by public elementary and secondary schools[15]	36	....	$y'=\$10,000/[1+e^{(1.786-.04t)}]$	0.83	$0.063	$y'=\$10,000/[1+e^{(1.903-.045t)}]$	
Expenditures from current funds and total expenditures by institutions of higher education	37,39						
Current funds:							

Student education (per student):[16]					
Public		y'=$2,203+$68(t)	0.80	$109	y'=$1,861+$84(t)
Nonpublic		y'=$2,878+109(t)	0.80	$175	y'=$2,231-$140(t)
Research (000's dollars) excluding federally funded R&D centers:[17]					
Public	....	y'=$1,539,649+$52,714(t)	0.76	$95,135	y'=$1,539,649+$52,714(t)
Nonpublic	....	y'=$1,524,297-$44,057(t)	0.91	$45,379	y'=$1,683,830-$51,654(t)
Public service (percent of student education):[18]					
Public	....	y'=15.7%-0.8%(t)	0.87	1.01%	y'=17.7%-0.9%(t)
Nonpublic	....	y'= 7.4%-0.1%(t)	0.67	1.27%	y'= 5.4%-0.1%(t)
Auxiliary enterprises (percent of student education):[18]					
Public	....	y'=30.3%-1.6%(t)	0.86	2.08%	y'=35.5%-1.9%(t)
Nonpublic	....	y'=36.0%-1.4%(t)	0.86	1.84%	y'=41.0%-1.7%(t)
Scholarships and fellowships (percent of student education):[18]					
Public	....	y'= 5.1%+0.1%(t)	0.05	0.54%	y'=3.7%+0.1%(t)
Nonpublic	....	y'=11.2%+0.1%(t)	0.53	0.28%	y'=9.9%+0.2%(t)
Hospitals and independent operations (000's of dollars):[19]					
Public	....	y'=$682,461+$109,725t	0.93	$97,264	y'=$1,089,854+$90,326(t)
Nonpublic	....	y'=$761,064+$70,986t	0.75	$130,381	y'=$1,173,996+$51,323(t)
Mandatory transfers (000's of dollars):[20]					
Public	....	y'=$649,111+$4,213t	0.03	$74,387	y'=$692,138+$2,163t
Nonpublic	....	y'=$343,596-$12,379t	0.35	$54,317	y'=$496,054-$19,638t
Capital outlay of institutions of higher education (millions of dollars):[21]					
Public	$3,473	....	....	....	....
Nonpublic	$1,583	....	....	....	....

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[1] See method detailed for table 33 in footnotes 9 to 12 of this table (A-4).

[2] Ratio of nonpublic school teachers to public school teachers times public school current expenditures.

[3] See method detailed for table 35.

[4] Ratio of nonpublic school teachers to public school teachers times public school capital outlay.

[5] See method detailed for table 36 in footnote 17 of this table (A-4).

[6] Ratio of nonpublic school teachers to public school teachers times public school interest.

[7] See method detailed for table 37 in footnotes 18 to 25 of this table (A-4).

[8] See method detailed for table 39 in footnote 26 of this table (A-4).

[9] Constant percent assumes that the percent that average daily attendance in public schools is of K-12 enrollment in public schools (92) will continue thorugh 1985-86.

[10] y=current expenditure allocated to pupil costs per pupil in average daily attendance.

[11] Average daily attendance times cost per pupil for each year.

[12] Percent that expenditures for all programs were of expenditures allocated to pupil costs in recent years. Constant percent times total current expenditures allocated to pupil costs=current expenditures for all programs.

[13] y=average annual salary of classroom teachers in public elementary and secondary schools.

[14] Average annual salary times number of classroom teachers in public elementary and secondary schools in each year.

[15] y=annual expenditures for interest in public elementary and secondary schools.

[16] y=expenditures for student education per full-time-equivalent student in institutions of higher education.

[17] y=expenditures for research in institutions of higher education, excluding federally funded research and development centers, and held at the 1976-77 level for the remainder of the projection.

[18] y=percent that expenditures in this category are of expenditures for student education in institutions of higher education. Percents are held at 1976-77 levels for the remainder of the projection.

[19] y=expenditures for hospitals and independent operations and held at the 1976-77 levels for the remainder of the projection.

[20] y=transfers from current funds and held at the 1976-77 levels for the remainder of the projection.

[21] Estimated for 1975-76 and 1976-77 and held constant at the 1976-77 level to 1985-86.

Table A-5.--Methodology (Chapter VI)

	Text table number	Projection method					
		Constant	Trend				
			Least squares equation (y=dollars: t=years; 1966-67=1)	Index of determination	Standard error	Adjusted equation	Other
Estimated average charges per full-time undergraduate resident degree-credit student in institutions of higher education (dollars)	40						
Tuition and required fees:[1]							
Public		....	$y'=\$451.25+\$8.01t$	0.72	17.11	$y'=\$414.20+\$9.87t$	
Universities		....	$y'=\$593.71+\$11.84t$	0.38	51.89	$y'=\$482.23+\$17.42t$	
Other 4-year institutions		....	$y'=\$413.31+\$15.24t$	0.57	45.69	$y'=\$334.28+\$19.19t$	
2-year institutions		....	$y'=\$195.93+\$15.22t$	0.88	19.02	$y'=\$205.21+\$14.75t$	
Nonpublic		....	$y'=\$2{,}083.83+\$37.82t$	0.54	119.50	$y'=\$1{,}825.20+\$50.76t$	
Universities		....	$y'=\$2{,}453.12+\$46.48t$	0.63	123.01	$y'=\$2{,}166.88+\$60.79t$	
Other 4-year institutions		....	$y'=\$1{,}976.11+\$39.95t$	0.57	120.14	$y'=\$1{,}691.26+\$54.19t$	
Board:							
Public[2]		$674	NA	NA	NA	[3] NA	
Universities[2]		$703	NA	NA	NA	[3] NA	
Other 4-year institutions[2]		$649	NA	NA	NA	[3] NA	
2-year institutions			$y'=\$643.57+\$7.78t$	0.54	24.82	$y'=\$591.56+\$10.38t$	
Nonpublic[2]		$712	NA	NA	NA	[3] NA	
Universities[2]		$787	NA	NA	NA	[3] NA	
Other 4-year institutions[2]		$683	NA	NA	NA	[3] NA	
2-year institutions[2]		$671	NA	NA	NA	[3] NA	
Room:[4]							
Public[4]		....	$y'=\$501.47+\$9.39t$	0.44	36.44	$y'=\$419.73+\$13.47t$	
Universities[4]		....	$y'=\$548.66+\$7.15t$	0.28	39.91	$y'=\$457.77+\$11.69t$	
Other 4-year institutions[4]		....	$y'=\$459.36+\$11.94t$	0.63	31.31	$y'=\$390.65+\$15.37t$	
2-year institutions[4]		....	$y'=\$375.94+\$14.28t$	0.61	39.39	$y'=\$286.10+\$18.77t$	
Nonpublic[4]		....	$y'=\$652.15-\$1.41t$	0.28	28.38	$y'=\$596.74+\$1.36t$	
Universities[4]		....	$y'=\$754.99-\$0.06t$	....	37.08	$y'=\$699.57+\$2.71t$	
Other 4-year institutions[4]		....	$y'=\$604.94-\$0.72t$	....	24.24	$y'=\$551.46+\$1.95t$	
2-year institutions		$545	NA	NA	NA	[3] NA	

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[1] y'=average charge for tuition and required fees per full-time degree-credit student, calculated separately for each category by type and control of institutions.

[2] y'=average charge for board per full-time degree-credit student, calculated separately for each category by type and control of institution with $t=9$ held constant to 1985-86.

[3] Charges frozen at the projected 1976-77 level. A projected decrease in charge for board is not expected to be valid.

[4] y'=average charge for room per full-time degree-credit student, calculated separately for each category by type and control of institution.

Estimation Methods

General Statement

The basic data for projecting the educational components listed below were wholly or partially estimated for the years indicated. (A few items which were estimated and explained in the tables are now shown here.)

Unless otherwise specified, all educational components were estimated separately by type and control of institution and by sex and attendance status of students:

1. Degrees, bachelor's and master's—total, library science, social work—1964-65 (tables 16-19)
2. Enrollment, first-time (tables 11-13)
   a. Degree-credit, 1966 and 1967
   b. Attendance status, 1965 to 1967
3. Enrollment, total (tables 6-8, 10, 14)
   a. Graduate (resident) 1964 to 1966
   b. Undergraduate, 1964 to 1966
   c. Degree-credit, 1966
   d. Non-degree-credit, 1966
   e. Degree-credit, 1967
   f. Non-degree-credit, 1967
   g. Graduate (resident), 1967
   h. Total graduate, 1965-1967
   i. Undergraduate and first-professional, 1967
   j. Total graduate, 1968
   k. Total graduate, attendance status, 1965-1968
   l. Undergraduate and first-professional, 1968
   m. Non-degree-credit attendance status, 1965 to 1967
   n. Total graduate enrollment, including graduate extension enrollment, 1964-1968
4. Public elementary teachers and public secondary teachers, separately, 1971-1975 (table 22,23)
5. Instructional staff in institutions of higher education (tables 27-29a)
   a. Full-time junior instructional staff, 1965
   b. Full-time equivalent of part-time junior instructional staff, 1965
   c. Full-time equivalent instructional staff, 1969 and 1971
   d. Full-time and part-time instructional staff, 1969 and 1971

1. Degrees, bachelor's and master's—total, library science, social work—1964-65 (tables 16-19)

For 1964-65, *all* master's degrees that were considered first-professional were reported as first-professional degrees. These were reported separately as first-professional degrees and were added to bachelor's degrees for 1964-65. Most library science and social work master's degrees were in this category.

Beginning in 1965-66, all master's degrees, whether or not they were considered first-professional, were reported with master's degrees. In 1969, in order to obtain comparable series in these two fields as well as for total master's degrees and total bachelor's and first-professional degrees, degrees reported as first-professional degrees in library science and in social work for 1963-64 and 1964-65 were substracted from bachelor's and first-professional degrees and added to master's degrees.

2. Enrollment, first-time (tables 11-13)

2a. Degree-credit, unreported in 1966 and 1967

To estimate resident and extension first-time opening fall enrollment by degree-credit status in both 1966 and 1967, percentages of resident and extension total enrollment by degree-credit status calculated from the unpublished 1966 comprehensive survey of enrollment (not available by sex) were applied to resident and extension first-time enrollment (combined degree-credit, non-degree-credit, men, and women).

To estimate resident and extension degree-credit first-time opening fall enrollment by sex in both 1966 and 1967, percentages of resident and extension degree-credit total enrollment by sex calculated from the 1965 opening fall enrollment survey were applied to estimated degree-credit first-time enrollment on men and women.

2b. Attendance status, unreported 1965 to 1967

To estimate degree-credit first-time enrollment by attendance status in 1965 to 1967, percentages of degree-credit first-time enrollment by attendance status calculated from the 1961 comprehensive survey of enrollment and the 1968 opening fall enrollment survey, together with interpolations of these percentages for the years 1965 to 1967, were applied to 1965 to 1967 degree-credit first-time enrollment (combined full-time and part-time).

3. Enrollment, total (tables 6-8, 10, 14)

3a. Resident graduate, unreported 1965 to 1966

To estimate resident graduate opening fall enrollment from 1965 to 1966 in each control-of-institution and sex category, intepolations were made between the percentages that resident graduate enrollment were of resident and extension degree-credit enrollment in 4-year institutions in 1963 and 1967. These interpolated percentages were applied to resident and extension degree-credit enrollment in 1965 and 1966.

To estimate resident graduate opening fall enrollment by attendance status from 1965 and 1966 in each control-of-institution and sex category, interpolations were made between the percentages that full-time resident graduate enrollment were of total resident graduate enrollment in 1963 and 1967. These percentages were applied to estimated resident graduate enrollment for 1965 and 1966, in each control-of-institution and sex-of-student category.

3b. Undergraduate, unreported 1965 and 1966

To estimate resident and extension undergraduate and first-professional opening fall enrollment in 4-year institutions, 1965 and 1966, the estimate of resident graduate enrollment was subtracted from degree-credit resident and extension enrollment in each year in each control-of-institution and sex- and attendance-status-of-student category. (In 2-year institutions, undergraduate degree-credit enrollment is the same as total degree-credit enrollment.)

3c. Degree-credit, unreported in 1966

To estimate resident and extension total opening fall enrollment by degree-credit status and attendance status in 1966, percentages of resident and extension total enrollment by degree-credit status in each attendance-status category calculated from the unpublished 1966 comprehensive survey of enrollment (not available by sex) were applied to reported 1966 total enrollment by attendance-status categories.

To estimate full-time degree-credit and part-time degree-credit opening fall enrollment by sex in 1966, percentages of full-time degree-credit enrollment by sex and of part-time degree-credit enrollment by sex calculated from the 1965 opening fall enrollment survey (non-degree-credit enrollment was not reported by attendance status in 1965) were applied to estimated degree-credit attendance-status categories.

3.d. Non-degree-credit, unreported in 1966

The estimation of non-degree-credit enrollment by attendance status in 1966 was a byproduct of the estimation of degree-credit enrollment by attendance status in 1966.

To estimate non-degree-credit total opening fall enrollment by attendance status and sex in 1966, estimated degree-credit categories by attendance and sex were subtracted from reported total degree-credit and non-degree-credit categories by attendance status and sex. These differences were adjusted to agree with the estimated nondegree categories by attendance status which were a byproduct of the estimation of degree-credit enrollment by attendance status.

3e. Degree-credit, unreported in 1967

To estimate resident and extension total opening fall enrollment by degree-credit status in 1967:

(1) Percentages of resident and extension total enrollment by degree-credit status in each sex category (not available by attendance status), calculated from the unpublished 1967 comprehensive survey of enrollment, were applied to reported 1967 total enrollment by sex categories.

(2) Similar percentages by degree-credit status in each attendance-status category (not available by sex), calculated from the 1967 comprehensive enrollment survey, were applied to reported 1967 resident and extension total enrollment by attendance-status categories.

(3) Probability estimates were applied to the two sets of estimates (one by sex, one by attendance status) to obtain estimates of resident and extension total enrollment by degree-credit status in each sex and attendance-status category.

3f. Non-degree-credit, unreported, 1967

The estimation of resident and extension non-degree-credit enrollment by sex and attendance status in 1967 was a byproduct of the estimation of resident and extension degree-credit enrollment by attendance status and sex in 1967.

3g. Resident graduate, unreported in 1967

To estimate resident graduate opening fall enrollment by sex and attendance status in 1967:

(1) Percentages of resident postbaccalaureate enrollment by resident graduate and first-professional enrollment status in each sex category, calculated from the unpublished 1967 comprehensive survey of enrollment, were applied to reported 1967 resident postbaccalaureate enrollment in corresponding sex categories.

(2) Similar percentages for attendance-status categories, calculated from the 1967 comprehensive survey of enrollment (this survey reported categories by sex and attendance status independently), were applied to reported 1967 resident postbaccalaureate enrollment in corresponding attendance-status categories.

(3) Probability estimates were applied to the two sets of estimates (one by sex, one by attendance status) to obtain estimates of resident graduate and resident first-professional enrollment by sex and attendance status.

3h. Total graduate by sex, unreported in 1965-1967

To estimate total graduate opening fall enrollment for each sex in 1965-1967, the average of the percentages that resident graduate enrollment was of total graduate enrollment in 1968-1972 was applied to the estimates of resident graduate enrollment for 1965-1967.

3i. Undergraduate and first-professional, unreported in 1967

To estimate resident and extension degree-credit undergraduate and first-professional opening fall enrollment in 1967 (a revision because the 1967 comprehensive survey of enrollment was not available until 1970), estimated 1967 resident graduate enrollment was subtracted from the total of estimated 1967 resident and extension degree-credit enrollment in 4-year institutions in each sex and attendance-status category.

3j. Graduate enrollment by sex and attendance status, unreported in 1968

To estimate graduate opening fall enrollment for each sex in 1968, the percentage that graduate enrollment was of postbaccalaureate (graduate and first-professional) enrollment was assumed to be the same as the 1969 percentage. This percentage was applied to the 1968 postbaccalaureate enrollment to estimate 1968 graduate enrollment.

3k. Total graduate by control and attendance status, unreported in 1964-1968

To estimate total graduate opening fall enrollment by control and attendance status in 1965-1968:

(1) The percentage that resident graduate enrollment was of total graduate enrollment in private institutions was held constant at the 1969 level and applied to estimates of private resident graduate enrollment for 1965-1968. Total public graduate enrollment for each year, 1965-1968, was estimated as the difference between total graduate enrollment and total private graduate enrollment.

(2) Full-time graduate enrollment was assumed to be the same as full-time resident graduate enrollment in 1965-1967. Part-time graduate enrollment was estimated as the difference between total graduate enrollment and full-time graduate enrollment for each year, 1965-1967.

(3) To estimate graduate opening fall enrollment by attendance status in 1968, it was assumed that the number of part-time first-professional students in 1968 was the same small number as in 1969. This number was then subtracted from total part-time postbaccalaureate enrollment to estimate graduate part-time enrollment. Graduate full-time enrollment was estimated as the difference between total graduate enrollment and part-time graduate enrollment.

3l. Undergraduate and first-professional, unreported in 1968

To estimate degree-credit undergraduate and first-professional opening fall enrollment in 1968 (revised because the 1967 comprehensive survey of enrollment was not available until 1970), estimated 1968 graduate enrollment was subtracted from the total of reported 1968 degree-credit enrollment in each sex and attendance-status category.

3m. Enrollment, total non-degree-credit by attendance status, 1965-67

Non-degree-credit enrollment by attendance status was not reported in the opening fall enrollment surveys prior to 1968. In 1964, the sample survey of full-time-equivalent enrollment and credit hours reported that 40 percent of total non-degree-credit enrollment was full time (not available by type and control of institution).

To estimate the full-time percentages for 1964, the full-time percentages by type and control of institution from the 1968 opening fall enrollment survey were prorated down to equal about 40 percent for the total. For the years 1965 to 1967, the percentages between 1964 and the actual 1968 percentages, for each type and control of institution, were interpolated.

3n. Total graduate enrollment, including graduate extension enrollment, unreported in 1965-1968

To estimate total graduate enrollment, by control, including graduate extension enrollment, in 1965-1968, graduate resident enrollments in 1965-1968 were divided by the percentage that resident graduate enrollment was of total graduate enrollment in 1969.

4. Public elementary and secondary teachers, separately, unreported 1971-1975 (tables 22,23)

For teachers in public elementary and secondary schools in each year, both the number of elementary teachers and the number of secondary teachers reported by the National Education Association were prorated to the total number of teachers reported in *Statistics of Public Schools.*

5. Instructional staff in institutions of higher education (tables 27-29a)

5a. Full-time junior instructional staff, unreported in 1965

The percentage in 1966 that full-time junior instructional staff was of total junior instructional staff was assumed to have been the same in 1965.

5b. Full-time equivalent of part-time junior instructional staff, unreported in 1965

The percentage in 1966 that full-time equivalent of part-time junior instructional staff was of part-time junior instructional staff was assumed to have been the same in 1965.

5c. Full-time-equivalent instructional staff, unreported in 1969 and 1971

For each type and control of institution the ratio of total degree-credit and non-degree credit full-time-equivalent enrollment to total full-time-equivalent faculty (instructor or above and junior instructional staff) for the years 1968, 1970, and 1972 was determined. This ratio was then interpolated for 1969 and 1971. By dividing total degree-credit and non-degree-credit full-time-equivalent enrollment for 1969 and 1971 by these interpolated ratios, estimates of full-time-equivalent instructional staff were obtained.

The ratio of full-time-equivalent instructor or above to total full-time-equivalent faculty was determined for 1968, 1970, and 1972. Ratios were obtained for 1969 and 1971 by interpolation. The ratios for 1969 and 1971 were applied to the total full-time-equivalent faculty figures to obtain estimates of full-time-equivalent instructor or above and junior instructional staff.

5d. Full-time and part-time instructional staff, unreported in 1969 and 1971

The following procedure was followed for instructor or above and junior instructional staff separately and for each type of control category of institution of higher education:

(1) The ratio of full-time instructional staff to full-time-equivalent instructional staff was calculated for 1968, 1970, and 1972 and interpolated for 1969 and 1971. These ratios were then applied to the full-time-equivalent figures for 1969 and 1971, yielding estimates for full-time instructional staff.

(2) By subtracting this full-time figure from the full-time-equivalent figure, an estimated full-time equivalent of part-time figure was obtained.

(3) The ratios of full-time equivalent of part-time instructional staff to part-time instructional staff was then calculated for 1968, 1970, and 1972 and interpolated for 1969 and 1971.

(4) These ratios (calculated in 3 above) were then divided into the full-time equivalent of part-time instructionall staff figures for 1969 and 1971. The quotient was assumed to be the part-time figure for instructional staff in that year.

Classification of Degrees by Field of Study

[Individual fields listed in *Taxonomy of instructional Programs in Higher Education*]

I. Social Sciences

- Social Sciences
    - Social sciences, general
    - Anthropology
    - Archaeology
    - Economics
    - History
    - Geography
    - Political science and government
    - Sociology
    - Criminology
    - International relations
    - Afro-American (black culture) studies
    - American Indian cultural studies
    - Mexican-American cultural studies
    - Urban studies
    - Demography
    - Area studies
    - Other
- Psychology
    - Psychology, general
    - Experimental psychology (animal and human)
    - Clinical psychology
    - Psychology for counseling
    - Social psychology
    - Psychometrics
    - Statistics in psychology
    - Industrial psychology
    - Developmental psychology
    - Physiological psychology
    - Other
- Public Affairs and Services
    - Community services, general
    - Public administration
    - Parks and recreation management
    - Social work and helping services (other than clinical social work)
    - Law enforcement and corrections (baccalaureate and higher programs)
    - International public service (other than diplomatic service)
    - Other
- Library Science
    - Library science, general
    - Other

II. Humanities

- Architecture and Environmental Design
    - Environmental design, general
    - Architecture
    - Interior design
    - Landscape architecture
    - Urban architecture
    - City, community, and regional planning
    - Other
- Fine and Applied Arts
    - Fine arts, general
    - Art (painting, drawing, sculpture)
    - Art history and appreciation
    - Music (performing, composition, theory)
    - Music (liberal arts program)
    - Music history and appreciation (musicology)
    - Dramatic arts
    - Dance
    - Applied design (ceramics, weaving, textile design, fashion design, jewelry, metalsmithing, interior decoration, commercial art)
    - Cinematography
    - Photography
    - Other
- Foreign Languages
    - Foreign languages, general (concentration on more than one foreign language without major emphasis on one)
    - French
    - German
    - Italian
    - Spanish
    - Russian
    - Chinese
    - Japanese
    - Latin
    - Greek, classical
    - Hebrew
    - Arabic
    - Indian (Asiatic)
    - Scandinavian languages
    - Slavic languages (other than Russian)
    - African languages (non-Semitic)
    - Other
- Communications
    - Communications, general
    - Journalism (printed media)
    - Radio/television
    - Advertising
    - Communications media (use of videotape, films, etc. oriented specifically toward radio/television
    - Other

- Letters
    - English, general
    - Literature, English
    - Comparative literature
    - Classics
    - Linguistics (includes phonetics, semantics, and philology)
    - Speech, debate, and forensic science (rhetoric and public address)
    - Creative writing
    - Teaching of English as a foreign language
    - Philosophy
    - Religious studies (excludes theological professions)
    - Other

III. Natural Sciences and Miscellaneous Fields

- Mathematics and Statistics
    - Mathematics, general
    - Statistics, mathematical and theoretical
    - Applied mathematics
    - Other
- Computer and Information Sciences
    - Computer and information sciences, general
    - Information sciences and systems
    - Data processing
    - Computer programing
    - Systems analysis
    - Other
- Engineering
    - Engineering, general
    - Aerospace, aeronautical and astronautical engineering
    - Agricultural engineering
    - Architectural engineering
    - Bioengineering and biomedical engineering
    - Chemical engineering (includes petroleum refining)
    - Petroleum engineering (excludes petroleum refining)
    - Civil, construction, and transportation engineering
    - Electrical, electronics, and communications engineering
    - Mechanical engineering
    - Geological engineering
    - Geophysical engineering
    - Industrial and management engineering
    - Metallurgical engineering
    - Materials engineering
    - Ceramic engineering
    - Textile engineering
    - Mining and mineral engineering
    - Engineering physics
    - Nuclear engineering
    - Engineering mechanics
    - Environmental and sanitary engineering
    - Naval architecture and marine engineering
    - Ocean engineering
    - Engineering technologies (baccalaureate and higher programs)
    - Other
- Physical Sciences
    - Physical sciences, general
    - Physics, general (excludes biophysics)
    - Molecular physics
    - Nuclear physics
    - Chemistry, general (excludes biochemistry)
    - Inorganic chemistry
    - Organic chemistry
    - Physical chemistry
    - Analytical chemistry
    - Pharmaceutical chemistry
    - Astronomy
    - Astrophysics
    - Atmospheric sciences and meteorology
    - Geology
    - Geochemistry
    - Geophysics and seismology
    - Earth sciences, general
    - Paleontology
    - Oceanography
    - Metallurgy
    - Other
- Biological Sciences
    - Biology, general
    - Botany, general
    - Bacteriology
    - Plant pathology
    - Plant pharmacology
    - Plant physiology
    - Zoology, general
    - Pathology, human and animal
    - Premedical, predental, and preveterinary science
    - Pharmacology, human and animal
    - Physiology, human and animal
    - Microbiology
    - Anatomy
    - Histology
    - Biochemistry
    - Biophysics
    - Molecular biology
    - Cell biology (cytology, cell physiology)
    - Marine biology
    - Biometrics and biostatistics
    - Ecology
    - Entomology
    - Genetics
    - Radiobiology
    - Nutrition, scientific (excludes nutrition in home economics and dietetics)
    - Neurosciences
    - Toxicology
    - Embryology
    - Other
- Agriculture and Natural Resources
    - Agriculture, general
    - Agronomy (field crops and crop management)
    - Soils science (management and conservation)
    - Animal science (husbandry)

  - Dairy science (husbandry)
  - Poultry science
  - Fish, game, and wildlife management
  - Horticulture (fruit and vegetable production)
  - Ornamental horticulture (floriculture, nursery science)
  - Agricultural and farm management
  - Agricultural economics
  - Agricultural business
  - Food science and technology
  - Forestry
  - Natural resources management
  - Agriculture and forestry technologies (baccalaureate and higher programs)
  - Range management
  - Other
- Health Professions
  - Health professions, general
  - Hospital and health care administration
  - Nursing (baccalaureate and higher programs)
  - Dentistry, D.D.S. or D.M.D. degree
  - Dental specialties (work beyond first-professional degree, D.D.S. or D.M.D.)
  - Medicine, M.D. degree
  - Medical specialties (work beyond first-professional degree, M.D.)
  - Occupational therapy
  - Optometry
  - Osteopathic medicine, D.O. degree
  - Pharmacy
  - Physical therapy
  - Dental hygiene (baccalaureate and higher programs)
  - Public health
  - Medical record librarianship
  - Podiatry (Pod.D. or D.P.) or podiatric medicine (D.P.M.)
  - Biomedical communication
  - Veterinary medicine, D.V.M. degree
  - Veterinary medicine specialties (work beyond first-professional degree, D.V.M.)
  - Speech pathology and audiology
  - Chiropractic
  - Clinical social work (medical and psychiatric and specialized rehabilitation services)
  - Medical laboratory technologies (baccalaureate and higher programs)
  - Dental technologies (baccalaureate and higher programs)
  - Radiologic technologies (baccalaureate and higher programs)
  - Other
- Accounting
- Other Business and Management
  - Business and commerce, general
  - Business statistics
  - Banking and finance
  - Investments and securities
  - Business management and administration
  - Operations research
  - Hotel and restaurant management
  - Marketing and purchasing
  - Transportation and public utilities
  - Real estate
  - Insurance
  - International business
  - Secretarial studies (baccalaureate and higher programs)
  - Personnel management
  - Labor and industrial relations
  - Business economics
  - Other
- Education
  - Education, general
  - Elementary education, general
  - Secondary education, general
  - Junior high school education
  - Higher education, general
  - Junior and community college education
  - Adult and continuing education
  - Special education, general
  - Administration of special education
  - Education of the mentally retarded
  - Education of the gifted
  - Education of the deaf
  - Education of the culturally disadvantaged
  - Education of the visually handicapped
  - Speech correction
  - Education of the emotionally disturbed
  - Remedial education
  - Special learning disabilities
  - Education of the physically handicapped
  - Education of the multiply handicapped
  - Social foundations (history and philosophy of education)
  - Educational psychology (includes learning theory)
  - Preelementary education (kindergarten)
  - Educational statistics and research
  - Educational testing, evaluation, and measurement
  - Student personnel (counseling and guidance)
  - Educational administration
  - Educational supervision
  - Curriculum and instruction
  - Reading education (methodology and theory)
  - Art education (methodology and theory)
  - Music education (methodology and theory)
  - Mathematics education (methodology and theory)
  - Science education (methodology and theory)
  - Physical education
  - Driver and safety education
  - Health education (includes family life education)

    - Business, commerce, and distributive education
    - Industrial arts, vocational and technical education
    - Agriculture education
    - Home economics education
    - Other
- Other
  - Home economics
    - Home economics, general
    - Home decoration and home equipment
    - Clothing and textiles
    - Consumer economics and home management
    - Family relations and child development
    - Foods and nutrition (includes dietetics)
    - Institutional management and cafeteria management
    - Other
  - Law
    - Law, general
    - Other
  - Military sciences
    - Military science (Army)
    - Naval science (Navy, Marines)
    - Aerospace science (Air Force)
    - Other
  - Theology
    - Theological professions, general
    - Religious music
    - Biblical languages
    - Religious education
    - Other
  - Interdisciplinary studies
    - General liberal arts and sciences
    - Biological and physical sciences
    - Humanities and social sciences
    - Engineering and other disciplines
    - Other

Changes in Degree-Level Definitions

Prior to 1960–61	1960–61 through 1964–65	1965–66
	BACHELOR'S DEGREES	
Number of years of work not specified. First-professional degrees included.	Number of years of work specified as less than 5. First-professional degrees excluded.	Number of years of work specified as less than 6. First-professional degrees excluded.
	FIRST-PROFESSIONAL DEGREES	
Included with bachelor's degrees.	5 or more years of work required. Includes first-professional degrees, such as degrees in dentistry, law, medicine, and theology. Includes master's degrees, such as degrees in business administration, hospital administration, law, library science, social work, and theology.	6 or more years of work required. Includes first-professional degrees, such as degrees in dentistry, law, medicine, and theology. Excludes all master's degrees.
	MASTER'S DEGREES	
	Includes all master's degrees except some considered first-professional. Includes second-professional degrees below level of doctorate.	Includes all master's degrees, including those considered first-professional prior to 1965–66. Includes second-professional degrees below level of doctorate.
	DOCTOR'S DEGREES	
Includes Ph.D. in any field and such degrees as doctor of education, doctor of juridical science, and doctor of public health (preceded by professional degree in medicine or sanitary engineering).	No change.	No change.

GLOSSARY

Courses

Adult education courses
Group instruction in courses which are designed for, or attended principally by, persons who have terminated their formal education.

Degree-credit courses
Courses which carry credit toward a bachelor's or higher degree.

Individual lessons
Lessons in music, art, speech, etc.

Non-degree-credit courses
Courses extending not more than 3 years beyond high school and designed to prepare students for immediate employment in an occupation or cluster of occupations at the technical and/or semiprofessional level (engineering-related or non-engineering-related), or at the craftsman-clerical level (artisans, skilled workers, and clerical workers).

Short courses
Courses that carry no credit toward a degree because of less than prescribed length.

Degrees

Bachelor's or first-level degrees
Lowest degree conferred by college, university, or professional school, requiring 4 or more years of academic work. For changes in National Center for Education Statistics classification, see appendix A, "Changes in Degree-Level Definitions."

Doctor's degrees (except first-professional)
Highest academic degree conferred by a university; includes Ph.D. in any field; includes doctor of education, doctor of juridical science, and doctor of public health (preceded by professional degree in medicine or sanitary engineering).

First-professional degrees
An academic degree which requires at least 2 academic years of previous college work for entrance and which requires a total of at least 6 academic years of college work for completion. Beginning in 1965–66, National Center for Education Statistics classification includes the following degrees only: Law (LL.B. or J.D. only); dentistry (D.D.S. or D.M.D. only); medicine (M.D. only); veterinary medicine (D.V.M. only); chiropody or podiatry (D.S.C. or D.P.); optometry (O.D.); osteopathy (D.O.); and theology (B.D. only). For changes in National Center for Education Statistics classification, see appendix A, "Changes in Degree-Level Definitions."

Master's or second-level degrees
An academic degree higher than a bachelor's but lower than a doctor's. All degrees classified as first-professional are excluded.

Expenditures, elementary and secondary

Current expenditures, regular elementary and secondary day schools
Includes current expenditures for administration, instruction, plant operation and maintenance, fixed charges (retirement, social security, insurance, etc.), and other school services (pupil transportation, food services, health services, attendance services, and miscellaneous school services).

Current expenditures, total
Includes current expenditures for regular elementary and secondary day school programs and current expenditures for other school programs including summer schools, adult education, community colleges, and community services.

Expenditures, total
Includes total current expenditures for all programs, capital outlay, and interest on school debt.

Expenditures, general

Capital outlay
An expenditure for land or existing buildings, improvement of grounds, construction of buildings, additions to buildings, and initial or additional equipment. Includes replacement and rehabilitation and installment or lease payments (excluding interest) which have a terminal date and result in the acquisition of property.

Constant dollars (1975–76)
Expenditure data which have been adjusted by means of price and cost indexes to equal the purchasing power of 1975–76 dollars. This eliminates inflationary factors and allows direct comparison between years.

Current dollars
Expenditure data which have not been adjusted to compensate for inflation. (Projection of unadjusted expenditure data has been limited to 2 years.)

Current expenditures
Any expenditure except for capital outlay and debt service. If accounts are kept on the accrual basis, current expense includes total charges incurred, whether paid or unpaid. If accounts are kept on the cash basis, it includes only actual disbursements.

Debt service
Includes payment for retirement of debt and for use of long-term loans (not repaid in the year in which made).

Interest
Any payment for use of money.

Expenditures, higher education

Current expenditures, total
Total expenditures from current funds less expenditures from current funds which are used for capital outlay (about 16 percent of total capital outlay is expended from current funds).

Current fund expenditures, total
Includes expenditures for auxiliary enterprises, organized research, related activities, student aid, and student education (approximately 16 percent of total capital outlay by institutions of higher education is estimated to have been expended directly from current funds).

Auxiliary enterprises.–Expenditures for services to students, faculty, or other staff for which a fee is charged that is directly related to, but not necessarily equal to, the cost of service, for example, dormitories, food service, and student stores.

Organized research.–Expenditures for all sponsored research and all separately budgeted research. Excludes expenditures for research carried on as part of the regular instructional services departmental research which are included with expenditures for student education.

Related activities.–Expenditures for activities which exist to provide instructional or laboratory experience for students and which incidentally create goods or services that may be sold on the campus or to the general public. Expenditures are incurred in addition to those necessary solely for the educational benefit of the students. Expenditures from current funds which could not be reported under "student education" or "organized research" are included here.

Student aid.–Expenditures for assistance to students through scholarships, fellowships, and prizes. Recipients are not required to repay, either through services or monies.

Student education.–Expenditures for those components of educational and general expenditures which are most closely related to instruction. Includes instruction and research which are part of regular instructional services (departmental research), extension and public service, libraries, physical plant operation and maintenance, general administration, and other sponsored activities.

Expenditures, total

Includes expenditures for capital outlay, debt service including interest, and total current expenditures.

Student charges

Student charges include charges for tuition, required fees, room, and board. Required fees are those for matriculation, laboratory, library, health, etc. They do not include books. Student charges as reported under this heading are based on full-time, resident (in-State or in-district) students.

Schools

Elementary schools

Schools with teaching primarily organized by grades, composed of a span of grades not above grade eight.

Independent nursery and kindergarten schools

Schools that offer nursery and/or kindergarten instruction only.

Other schools

Other schools include residential schools for exceptional children (public and nonpublic), Federal schools for Indians, federally operated schools on Federal installations, and subcollegiate departments of public and private institutions of higher education.

Regular schools

Schools for normal children that satisfy the requirements of the State education laws and offer at least one grade beyond kindergarten.

Residential schools for exceptional children

Residential schools for the handicapped (outside the regular public and private school systems) include public and private residential schools for the deaf, blind, mentally deficient, epileptic, and delinquent. (Most handicapped children are in special classes within the regular public and private school system.)

Secondary schools
Schools with teaching organized by subject matter taught, composed of junior high and high schools.

Special schools
Special schools are schools not in the regular school system, such as trade schools or business colleges.

Students

Advanced-degree students
Students who have attained at least one standard degree and have been accepted as candidates for master's or doctor's degrees.

Extension students
Students who most commonly take instruction away from main campus; also students receiving on-campus instruction offered by an extension division.

First-professional students
See "First-professional degrees."

First-time students
Freshmen not previously enrolled in any institutions of higher education.

Full-time students
Students enrolled in courses with credits equal to at least 75 percent of the normal full-time semester course load.

Full-time-equivalent students
The estimated number of full-time students equal to a given number of part-time students.

Graduate students
Students who have attained at least one standard degree and are or might be candidates for a master's or doctor's degree (except first-professional).

Occupational students
See "Non-degree-credit courses."

Postbaccalaureate students
Students who have attained at least one standard degree and are or might be candidates for a first-professional, master's, or doctor's degree.

Resident students (enrollment)
Students who attend classes on a main campus or a branch campus. Students' living quarters (whether on- or off-campus) and their legal domicile (whether in-State or out-of-State) are irrelevant.

Resident students (student charges)
Students with legal domicile in-State or in-district.

Unclassified students

Students who are not candidates for a degree, diploma, certificate, or equivalent award, although taking courses in regular classes with other students.

Undergraduate students

Degree-credit or non-degree-credit students who have not received formal recognition as having completed the prescribed degree-credit or non-degree,credit requirements of an accredited institution of higher education.

Instructional Staff

Instructor or above

Faculty with titles, such as professor, associate professor, assistant professor, instructor, lecturer, visiting professor, adjunct professor, and interim professor.

Junior instructor

Professional assistants to an instructor or above. Junior staff members are usually graduate students with titles such as graduate assistant or teaching fellow.

TECHNICAL APPENDIX B

Statistical Tables

Table B-1.–School-age population (U.S. Census Projection Series I, II, and III), ages 5, 6, and 5-13 years: United States, 1965 to 1986 [1]

[Ages as of October 1, populations in thousands]

Year (fall)	Age 5			Age 6			Ages 5-13		
	I	II	III	I	II	III	I	II	III
1965	....	4,108	....	....	4,098	....	....	35,877	....
1966	....	4,143	....	....	4,106	....	....	36,358	....
1967	....	4,055	....	....	4,142	....	....	36,661	....
1968	....	3,980	....	....	4,058	....	....	36,799	....
1969	....	3,882	....	....	3,986	....	....	36,772	....
1970	....	3,703	....	....	3,986	....	....	36,484	....
1971	....	3,521	....	....	3,718	....	....	35,926	....
1972	....	3,427	....	....	3,534	....	....	35,257	....
1973	....	3,378	....	....	3,441	....	....	34,555	....
1974	....	3,432	....	....	3,391	....	....	33,903	....
1975	....	3,513	....	....	3,446	....	....	33,300	....
					Projected				
1976	....	3,498	....	....	3,528	....	....	32,763	....
1977	....	3,237	....	....	3,513	....	....	32,023	....
1978	....	3,070	....	....	3,252	....	....	31,210	....
1979	3,091	3,042	3,009	3,084	3,084	3,084	30,597	30,548	30,515
1980	3,368	3,125	2,940	3,106	3,057	3,023	30,456	30,164	29,945
1981	3,653	3,237	2,871	3,383	3,139	2,955	30,692	29,983	29,399
1982	3,893	3,376	2,914	3,669	3,252	2,885	31,205	29,977	28,931
1983	4,106	3,521	3,045	3,909	3,391	2,928	31,876	30,064	28,541
1984	4,298	3,664	3,164	4,123	3,537	3,058	32,760	30,213	28,185
1985	4,472	3,797	3,250	4,314	3,679	3,179	33,634	30,508	27,932
1986	4,629	3,899	3,298	4,489	3,813	3,266	35,033	31,171	27,991

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[1] In projecting population, the Census Bureau uses a cohort-component method in which each of the components of population change (fertility, mortality, and migration) is projected separately. The key assumption in this method is that of completed cohort fertility (average number of births per woman upon completion of childbearing).

The Census Bureau uses several different assumptions as to the ultimate completed cohort fertility. The following are three of these assumptions: Series I–2.7 children per woman, Series II–2.1 children per woman, and Series III–1.7 children per woman.

The Series II projection is used throughout this publication (except in tables B-3 and B-4) for making projections of educational statistics. The Series II projection was selected because the ultimate completed cohort-fertility assumption of 2.1 births per woman most closely agrees with the most recent expected fertility data. A population projection based on 2.1 births per woman is also of interest because at this rate and without migration the population would replace itself after enough time had elapsed for the age structure to stabilize.

SOURCES: National Center for Education Statistics estimates are based on U.S. Department of Commerce, Bureau of the Census, publications: (1) unpublished data consistent with estimated data in *Current Population Reports*, "Population Estimates and Projections: Estimates of the Population of the United States by Age, Sex, and Race: April 1, 1960 to July 1, 1973," Series P-25, No. 519, April 1974, and (2) "Projections of the Population of the United States, by Age and Sex, 1975 to 2000 with Extension of Total Population to 2025" (advanced report), Series P-25, No. 541, February 1975.

Table B-2.--High school- and college-age population: United States, 1965-1986[1]

[Ages as of October 1, populations in thousands]

Year (fall)	14-17	18		18-21		Composite populations[2]	
	Total	Men	Women	Men	Women	Men	Women
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965	14,201	1,831	1,777	6,254	6,117	1,368	1,419
1966	14,473	1,784	1,731	6,641	6,479	1,381	1,395
1967	14,829	1,794	1,740	7,049	6,874	1,408	1,415
1968	15,255	1,833	1,780	7,334	7,154	1,501	1,555
1969	15,630	1,891	1,835	7,327	7,151	1,660	1,750
1970	15,992	1,946	1,885	7,476	7,303	1,677	1,726
1971	16 341	1,991	1,934	7,649	7,471	1,723	1,751
1972	16,595	2,032	1,972	7,847	7,666	1,759	1,771
1973	16,770	2,067	2,005	8,027	7,837	1,810	1,817
1974	16,880	2,116	2,050	8,196	7,998	1,838	1,858
1975	16,902	2,144	2,079	8,373	8,172	1,880	1,905
				Projected			
1976	16,845	2,141	2,079	8,504	8,302	1,924	1,949
1977	16,728	2,138	2,077	8,591	8,393	1,964	1,964
1978	16,528	2,148	2,084	8,648	8,451	2,006	2,026
1979	16,122	2,137	2,071	8,660	8,462	2,047	2,067
1980	15,608	2,102	2,036	8,636	8,433	2,068	2,076
1981	15,062	2,065	1,998	8,536	8,374	2,079	2,079
1982	14,553	1,997	1,934	8,488	8,272	2,090	2,083
1983	14,283	1,904	1,846	8,278	8,073	2,096	2,083
1984	14,279	1,834	1,776	8,022	7,817	2,079	2,054
1985	14,358	1,798	1,740	7,741	7,545	2,058	2,023
1986	14,219	1,800	1,741	7,481	7,291	2,022	1,974

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[1] All ages are in completed years except age 18, which has been calculated to nearest birthday. No fertility assumptions are used in this table because the persons included are already born.

[2] The composite population (used for projecting degrees) was derived by (a) prorating to 100 percent the detruncated percentage distribution of the ages of recipients of bachelor's degrees which had been found by Laura M. Sharpin in the 1958 survey *Two Years After the College Degree;* and (b) applying these percentages to corresponding age groups which were consistent with the other populations shown in this table. For further estimating details, see appendix A, "Estimation Methods," sec. 5.

SOURCES: National Center for Education Statistics estimates are based on U.S. Department of Commerce, Bureau of the Census, publications: (1) unpublished data consistent with estimated data in *Current Population Reports,* "Population Estimates and Projections: Estimates of the Population of the United States by Age, Sex, and Race: April 1, 1960 to July 1, 1973," Series P-25, No. 519, April 1974, and (2) "Projections of the Population of the United States, by Age and Sex, 1975 to 2000 with Extension of Total Population to 2025" (advanced report), Series P-25, No. 541, February 1975.

Table B-3.–Enrollment in grades K-8 and 9-12 of regular day schools, with projections based on U.S. Census population projection Series III, by institutional control: United States, fall 1965 to 1985[1]

[In thousands]

Year (fall)	Total public and nonpublic			Public			Nonpublic (estimated)[2]		
	K-12	K-8	9-12	K-12	K-8	9-12	K-12	K-8	9-12[3]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1965	48,473	35,463	13,010	42,173	30,563	11,610	6,300	[4]4,900	[4]1,400
1966	49,239	35,945	13,294	43,039	31,145	11,894	6,200	4,800	1,400
1967	49,891	36,241	13,650	43,891	31,641	12,250	6,000	4,600	1,400
1968	50,744	36,626	14,118	44,944	32,226	12,718	5,800	4,400	1,400
1969	51,119	36,797	14,322	45,619	32,597	13,022	5,500	4,200	1,300
1970	51,309	36,677	14,632	45,909	32,577	13,332	5,400	[5]4,100	[5]1,300
1971	51,381	36,265	15,116	46,081	32,265	13,816	5,300	4,000	1,300
1972	51,044	35,831	15,213	45,744	31,831	13,913	5,300	4,000	1,300
1973	50,729	35,353	15,377	45,429	31,353	14,077	5,300	4,000	1,300
1974	50,353	34,821	15,532	45,053	30,921	14,132	5,300	3,900	1,400
1975	50,138	34,445	15,694	44,838	30,545	14,294	5,300	3,900	1,400
					Projected[6]				
1976	49,693	33,972	15,721	44,393	30,072	14,321	5,300	3,900	1,400
1977	49,019	33,361	15,658	43,719	29,461	14,258	5,300	3,900	1,400
1978	48,137	32,636	15,501	42,837	28,736	14,101	5,300	3,900	1,400
1979	47,146	32,021	15,125	41,846	28,121	13,725	5,300	3,900	1,400
1980	46,148	31,515	14,633	40,848	27,615	13,233	5,300	3,900	1,400
1981	45,219	31,120	14,099	39,919	27,220	12,699	5,300	3,900	1,400
1982	44,375	30,785	13,590	39,075	26,885	12,190	5,300	3,900	1,400
1983	43,862	30,550	13,312	38,562	26,650	11,912	5,300	3,900	1,400
1984	43,626	30,348	13,278	38,326	26,448	11,878	5,300	3,900	1,400
1985	43,538	30,210	13,328	38,238	26,310	11,928	5,300	3,900	1,400

[1] Does not include independent nursery schools and kindergartens, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] Estimated unless otherwise noted. Estimates for 1971 through 1975 revised based on 1975 information from Curriculum Information Center and Market Data Retrieval. These estimates differ from figures shown in 1975 and earlier editions.

[3] Includes some pupils enrolled in grades 7 and 8 of nonpublic secondary schools from 1965 through 1968.

[4] Reported data from Office of Education surveys.

[5] Estimates are based on reported data from the Office of Education and the National Catholic Education Association.

[6] The projection of fall enrollment in regular day schools is based on the following assumptions: (a) Enrollment in regular public nursery schools and kindergartens will remain constant with respect to total public nursery schools and kindergartens at the 1975 level. (b) The enrollment rate of the 6-year-old population in public school grade 1 will remain constant at the 1975 level. (c) The retention rates of all other public school grades will remain constant at the average of the rates for the past 5 years. (d) Enrollment in grades K-8 and 9-12 in regular nonpublic day schools will remain constant at the 1975 levels through 1985.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on (1) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Statistics of Public Schools,* fall 1965 through 1975, (b) *Statistics of Nonpublic Elementary and Secondary Schools, 1970-71,* (c) *Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69,* (d) *Statistics of Nonpublic Elementary and Secondary Schools, 1965-66,* and (2) National Catholic Education Association publications: (a) *A Report on U.S. Catholic Schools, 1970-71,* and (b) *U.S. Catholic Schools,* 1971-72 through 1975-76.

The population projections, as of October 1, of 6-year-olds on which the enrollment projections in grade 1 are based, are consistent with Series III population projections in U.S. Department of Commerce, Bureau of the Census, *Current Population Reports,* Series P-25, No. 541, February 1975. The Series I, II, and III population projections, together with definitions of each series, are shown in appendix B, table B-1.

Table B-4.–Enrollment in grades K-8 and 9-12 of regular day schools, with projections based on U.S. Census population projection Series I, by institutional control: United States, fall 1965 to 1985[1]

[In thousands]

Year (fall)	Total public and nonpublic			Public			Nonpublic (estimated)[2]		
	K-12	K-8	9-12	K-12	K-8	9-12	K-12	K-8	9-12[3]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1965	48,473	35,463	13,010	42,173	30,563	11,610	6,300	[4]4,900	[4]1,400
1966	49,239	35,945	13,294	43,039	31,145	11,894	6,200	4,800	1,400
1967	49,891	36,241	13,650	43,891	31,641	12,250	6,000	4,600	1,400
1968	50,744	36,626	14,118	44,944	32,226	12,718	5,800	4,400	1,400
1969	51,119	36,797	14,322	45,619	32,597	13,022	5,500	4,200	1,300
1970	51,309	36,677	14,632	45,909	32,577	13,332	5,400	[5]4,100	[5]1,300
1971	51,381	36,265	15,116	46,081	32,265	13,816	5,300	4,000	1,300
1972	51,044	35,831	15,213	45,744	31,831	13,913	5,300	4,000	1,300
1973	50,729	35,353	15,377	45,429	31,353	14,077	5,300	4,000	1,300
1974	50,353	34,821	15,532	45,053	30,921	14,132	5,300	3,900	1,400
1975	50,138	34,445	15,694	44,838	30,545	14,294	5,300	3,900	1,400
					Projected[6]				
1976	49,693	33,972	15,721	44,393	30,072	14,321	5,300	3,900	1,400
1977	49,024	33,366	15,658	43,724	29,466	14,258	5,300	3,900	1,400
1978	48,177	32,676	15,501	42,877	28,776	14,101	5,300	3,900	1,400
1979	47,329	32,204	15,125	42,029	28,304	13,725	5,300	3,900	1,400
1980	46,738	32,105	14,633	41,438	28,205	13,233	5,300	3,900	1,400
1981	46,543	32,444	14,099	41,243	28,544	12,699	5,300	3,900	1,400
1982	46,644	33,054	13,590	41,344	29,154	12,190	5,300	3,900	1,400
1983	47,166	33,854	13,312	41,866	29,954	11,912	5,300	3,900	1,400
1984	48,038	34,760	13,278	42,738	30,860	11,878	5,300	3,900	1,400
1985	49,121	35,793	13,328	43,821	31,893	11,928	5,300	3,900	1,400

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[1] Does not include independent nursery schools and kindergartens, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] Estimated unless otherwise noted. Estimates for 1971 through 1975 revised based on 1975 information from Curriculum Information Center and Market Data Retrieval. These estimates differ from figures shown in 1975 and earlier editions.

[3] Includes some pupils enrolled in grades 7 and 8 of nonpublic secondary schools from 1965 through 1968.

[4] Reported data from Office of Education surveys.

[5] Estimates are based on reported data from the Office of Education and the National Catholic Education Association.

[6] The projection of fall enrollment in regular day schools is based on the following assumptions: (a) Enrollment in regular public nursery schools and kindergartens will remain constant with respect to total public nursery schools and kindergartens at the 1975 level. (b) The enrollment rate of the 6-year-old population in public school grade 1 will remain constant at the 1975 level. (c) The retention rates of all other public school grades will remain constant at the average of the rates for the past 5 years. (d) Enrollment in grades K-8 and 9-12 in regular nonpublic day schools will remain constant at the 1975 levels through 1985.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on (1) U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (a) *Statistics of Public Schools,* fall 1965 through 1975, (b) *Statistics of Nonpublic Elementary and Secondary Schools, 1970-71,* (c) *Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69,* (d) *Statistics of Nonpublic Elementary and Secondary Schools, 1965-66,* and (2) National Catholic Education Association publications: (a) *A Report on U.S. Catholic Schools, 1970-71,* and (b) *U.S. Catholic Schools,* 1971-72 through 1975-76.

The population projections, as of October 1, of 6-year-olds on which the enrollment projections in grade 1 are based, are consistent with Series I population projections in U.S. Department of Commerce, Bureau of the Census, *Current Population Reports,* Series P-25, No. 541, February 1975. The Series I, II, and III population projections, together with definitions of each series, are shown in appendix B, table B-1.

Table B-5.–Total enrollment in all institutions of higher education, by sex, with projections based on assumed high and low enrollment rates: United States, fall 1965 to 1985

[In thousands]

Year (fall) (1)	High alternative			Low alternative		
	Total (2)	Men (3)	Women (4)	Total (5)	Men (6)	Women (7)
1965	5,921	3,630	2,291	5,921	3,630	2,291
1966	6,390	3,856	2,534	6,390	3,856	2,534
1967	6,912	4,133	2,778	6,912	4,133	2,778
1968	7,513	4,478	3,035	7,513	4,478	3,035
1969	8,005	4,746	3,259	8,005	4,746	3,259
1970	8,581	5,044	3,538	8,581	5,044	3,538
1971	8,949	5,207	3,742	8,949	5,207	3,742
1972	9,215	5,239	3,976	9,215	5,239	3,976
1973	9,602	5,371	4,231	9,602	5,371	4,231
1974	10,224	5,623	4,602	10,224	5,623	4,602
1975	11,185	6,149	5,035	11,185	6,149	5,035
Projected[1]						
1976	11,785	6,436	5,349	11,479	6,288	5,191
1977	12,339	6,685	5,654	11,710	6,382	5,328
1978	12,905	6,935	5,970	11,880	6,437	5,443
1979	13,403	7,154	6,249	12,009	6,480	5,529
1980	13,833	7,332	6,501	12,060	6,488	5,572
1981	14,256	7,503	6,754	12,107	6,486	5,621
1982	14,572	7,622	6,950	12,046	6,434	5,612
1983	14,743	7,651	7,092	11,836	6,281	5,555
1984	14,765	7,621	7,144	11,549	6,112	5,437
1985	14,723	7,554	7,169	11,237	5,927	5,310

[1] The projections in this table are based on the same assumptions and methodology used in table 6 except for the following alternative assumptions of high and low enrollment rates: (1) The high alternative projection is based on the assumption that the percentage that men full-time undergraduate and unclassified degree-credit enrollment is of the male population aged 18-21 years will increase to the high enrollment rate levels of 1970 and 1971 by 1985; and for both men and women, full-time non-degree-credit enrollment, expressed as a percentage of population aged 18-21 years, will follow the 1968-75 logistic growth curve trend through 1985. (2) The low alternative projection is based on the assumption that the percentage that men full-time undergraduate and unclassified degree-credit enrollment is of the male population aged 18-21 years will follow the 1968 to 1975 downward trend through 1985; the percentage that women full-time undergraduate and unclassified degree-credit enrollment is of the female population aged 18-21 years will remain constant at the 1975 level through 1985; and for both men and woemn, full-time non-degree-credit enrollment, expressed as a percentage of the population aged 18-21 years, will remain constant at the 1975 level through 1985.

NOTE.–Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollment in Higher Education*, annually, 1965 through 1968, 1971 through 1975, (2) *Fall Enrollment in Higher Education, Supplementary Information*, 1969 and 1970, and (3) unpublished data from *Resident and Extension Enrollment in Institutions of Higher Education*, fall 1966, and 1967.

Population on which projections are based is shown in appendix B, table B-2.

Table B-6.--Total first-time degree-credit enrollment in all institutions of higher education, by sex, with projections based on assumed high and low enrollment rates: United States, fall 1965 to 1985

[In thousands]

Year (fall) (1)	High alternative			Low alternative		
	Total (2)	Men (3)	Women (4)	Total (5)	Men (6)	Women (7)
1965	1,442	829	613	1,442	829	613
1966[1]	1,378	787	591	1,378	787	591
1967[1]	1,439	814	626	1,439	814	626
1968	1,630	925	705	1,630	925	705
1969	1,749	986	763	1,749	986	763
1970	1,780	984	796	1,780	984	796
1971	1,766	968	798	1,766	968	798
1972	1,740	929	812	1,740	929	812
1973	1,757	931	826	1,757	931	826
1974	1,854	973	882	1,854	973	882
1975	1,910	992	918	1,910	992	918
				Projected[2]		
1976	1,951	1,012	939	1,912	992	920
1977	1,983	1,026	957	1,911	991	920
1978	2,034	1,050	984	1,923	995	928
1979	2,057	1,062	995	1,911	990	921
1980	2,060	1,063	997	1,883	974	909
1981	2,060	1,061	999	1,849	957	892
1982	2,030	1,044	986	1,790	925	865
1983	1,969	1,010	959	1,711	883	828
1984	1,930	990	940	1,648	849	799
1985	1,923	983	940	1,616	832	784

[1] The breakdown between degree-credit and non-degree-credit enrollment in 1966 and 1967 is estimated. See appendix A, "Estimation Methods," sec. 2a.

[2] The projections in this table are based on the same assumptions and methodology used in table 14 except for the following alternative assumptions of high and low enrollment rates: (1) The high alternative projection is based on the assumption that the percentage that men full-time first-time degree-credit enrollment is of the population averaging 18 years of age, will increase to the high enrollment rate of 1968. It was assumed that the percentage for women will increase at the same rate. (2) The low alternative projection is based on the assumption that for both men and women the percentage that full-time first-time degree-credit enrollment is of the population averaging 18 years of age, will remain constant at the 1975 level through 1985.

NOTE.--Data are for 50 States and the District of Columbia for all years. Because of rounding, details may not add to totals.

SOURCES: Enrollment data and estimates are based on U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Opening (Fall) Enrollment in Higher Education*, annually, 1965 through 1968, 1971 through 1975, (2) *Fall Enrollment in Higher Education, Supplementary Information*, 1969 and 1970, and (3) unpublished data from *Resident and Extension Enrollment in Institutions of Higher Education*, fall 1966 and 1967.

Population on which projections are based is shown in appendix B, table B-2.

Table B-7.–First-year students enrolled for master's and doctor's degrees and for first-professional degrees, by sex: United States and outlying areas, fall 1960 to 1975[1]

[In thousands]

Year (fall)	Enrollment for master's and doctor's degrees			Enrollment for first-professional degrees		
	Total	Men	Women	Total	Men	Women
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1960[2]	197	140	57	(3)	(3)	(3)
1961[4]	217	152	65	(3)	(3)	(3)
1962[4]	240	166	75	(3)	(3)	(3)
1963[4]	271	184	87	(3)	(3)	(3)
1964[4]	318	213	105	(3)	(3)	(3)
1965[4]	359	237	122	(3)	(3)	(3)
1966	371	241	130	36	35	2
1967	428	270	158	42	39	2
1968	458	279	179	47	44	3
1969	494	296	199	56	52	4
1970	528	316	212	63	58	5
1971	525	310	215	69	62	7
1972	540	310	230	72	62	9
1973	562	312	250	75	62	13
1974	598	324	274	79	64	16
1975	642	342	300	82	64	18

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[1] In 1975, the last year for which data are available, outlying areas made up slightly less than 0.5 percent of first-year enrollment for master's and doctor's degrees and slightly less than 1 percent of first-year enrollment for first-professional degrees.

[2] Estimation of sex breakdown based on the percentage that the sum of men's master's degrees in 1961-62 and men's doctor's degrees in 1964-65 was of the sum of total master's degrees in 1961-62 and total doctor's degrees in 1964-65.

[3] Not collected prior to 1966.

[4] The percentage that men's enrollment was of total enrollment was interpolated.

NOTE.–Because of rounding, details may not add to totals.

SOURCES: Enrollment data from U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, publications: (1) *Students Enrolled for Advanced Degrees,* fall 1966 through 1975, (2) *Enrollment for Master's and Higher Degrees, Fall 1965, Summary Report,* (3) *Enrollment for Master's and Higher Degrees, Fall 1964,* and (4) *Enrollment for Advanced Degrees,* fall 1960 through 1963.

Table B-8.--Estimated time lapse (in years) from first-year enrollment for advanced degrees to doctor's degree, by field of study, and by sex[1]

	Mathematics and statistics (1)	Computer and information sciences (2)	Engineering (3)	Physical sciences (4)	Biological sciences (5)	Agriculture and natural resources (6)	Health professions (7)	Accounting (8)
Men	6	6	6	6	6	7	6	6
Women	6	6	6	6	6	7	7	6

	Other Business and management (9)	Education (10)	Architecture and environmental design (11)	Fine and applied arts (12)	Foreign languages (13)	Social science (14)	Psychology (15)	Library sciences (16)
Men	6	10	8	9	8	7	6	7
Women	6	10	9	9	8	7	6	7

[1] Based on data from National Science Foundation on the time lapse from graduate entry to doctor's degree. All students enrolled in the first year of an advanced-degree course did not necessarily enter graduate school during the same year.

SOURCE: National Science Foundation, Science Education Studies Group, unpublished analysis of data on earned doctor's degrees in 1973-74 and selected years 1965-66 to 1973-74.

Table B-9.--Constant-dollar index

[1975-76 = 100]

July to June (1)	Consumer price index[1] (2)	Construction cost index[2] (3)
1965-66	57.567	46.855
1966-67	59.348	49.514
1967-68	61.329	52.174
1968-69	64.283	56.479
1969-70	68.089	60.405
1970-71	71.600	66.357
1971-72	74.183	73.702
1972-73	77.177	80.287
1973-74	84.082	86.957
1974-75	93.375	92.249
1975-76	100.000	100.000
	Estimated[3]	
1976-77	105.065	109.835

[1] The monthly indexes were averaged on a July-to-June basis to correspond with the school year and converted to 1975-76 = 100. The 1967 = 100 index number for 1975-76 was 166.167.

[2] The monthly indexes were averaged on a July-to-June basis to correspond with the school year and converted to 1975-76 = 100. The 1967 = 100 index number for 1975-76 was 197.417.

[3] Estimated on the assumption that the 1975-76 rate of inflation will continue through 1976-77.

SOURCES: The Consumer Price Index, prepared by the Bureau of Labor Statistics, U.S. Department of Labor; and the American Appraisal Company Construction Cost Index, published in *Construction Review* by the U.S. Department of Commerce.

Table B-10.--Estimated receipts by regular and "other" educational institutions, by level, by control, and by source: United States, 1965-66 to 1973-74[1]

Source of funds, by control and level (1)	1965-66 (2)	1967-68 (3)	1969-70 (4)	1971-72 (5)	1973-74 (6)	1965-66 (7)	1967-68 (8)	1969-70 (9)	1971-72 (10)	1973-74 (11)
	AMOUNT (in billions of current dollars)					Percent				
All levels of education:										
Total, public and nonpublic	$46.8	$58.9	$72.2	$88.0	$101.8	100.0	100.0	100.0	100.0	100.0
Federal	5.3	7.0	7.6	9.6	10.6	11.3	11.9	10.5	10.9	10.4
State	13.7	17.4	22.9	27.3	34.5	29.3	29.5	31.7	31.0	33.9
Local	15.5	18.9	23.0	28.7	30.5	33.1	32.1	31.9	32.6	30.0
All other	12.3	15.6	18.7	22.4	26.2	26.3	26.5	25.9	25.5	25.7
Total, public	36.9	46.8	58.4	71.6	82.9	100.0	100.0	100.0	100.0	100.0
Federal	3.9	5.3	5.9	7.7	8.6	10.6	11.3	10.1	10.8	10.4
State	13.6	17.3	22.8	27.1	34.2	36.8	37.0	39.0	37.8	41.2
Local	15.5	18.9	22.9	28.6	30.4	42.0	40.4	39.2	39.9	36.7
All other	3.9	5.3	6.8	8.2	9.7	10.6	11.3	11.7	11.5	11.7
Total nonpublic	9.9	12.1	13.8	16.4	18.9	100.0	100.0	100.0	100.0	100.0
Federal	1.4	1.7	1.7	1.9	2.0	14.1	14.1	12.3	11.6	10.6
State	.1	.1	.1	.2	.3	1.0	.8	.7	1.2	1.6
Local	(2)	(2)	.1	.1	.1	(3)	(3)	.7	.6	.5
All other	8.4	10.3	11.9	14.2	16.5	84.9	85.1	86.3	86.6	87.3
Elementary and secondary										
Total, public and nonpublic	30.9	37.9	46.4	57.5	65.6	100.0	100.0	100.0	100.0	100.0
Federal	2.2	3.0	3.4	4.7	5.1	7.1	7.9	7.3	8.2	7.8
State	9.9	12.3	16.1	19.1	24.1	32.0	[illegible]	34.7	33.2	36.7
Local	15.1	18.3	22.0	27.5	29.1	48.9	48.3	47.4	47.8	44.4
All other	3.7	4.3	4.9	6.2	7.3	12.0	11.3	10.6	10.8	11.1
Total, public	27.3	33.7	41.6	51.4	58.4	100.0	100.0	100.0	100.0	100.0
Federal	2.2	3.0	3.4	4.7	5.1	8.0	9.0	8.2	9.1	8.7
State	9.9	12.3	16.1	19.1	24.1	36.3	36.5	38.6	37.2	41.3
Local	15.1	18.3	22.0	27.5	29.1	55.3	54.2	52.9	53.5	49.8
All other	.1	.1	.1	.1	.1	.4	.3	.3	.2	.2
Total, nonpublic	3.6	4.2	4.8	6.1	7.2	100.0	100.0	100.0	100.0	100.0
Federal	...	...	...	...	...	...	...	...	...	...
State	...	...	...	...	...	...	...	...	...	...
Local	...	...	...	...	...	...	...	...	...	..
All other	3.6	4.2	4.8	6.1	7.2	100.0	100.0	100.0	100.0	100.0
Institutions of higher education										
Total, public and nonpublic	15.9	21.0	25.8	30.5	36.2	100.0	100.0	100.0	100.0	100.0
Federal	3.1	4.0	4.2	4.9	5.5	19.4	19.1	15.8	15.9	15.0
State	3.8	5.1	6.8	8.2	10.4	23.6	24.3	26.9	26.9	28.7
Local	.4	.6	1.0	1.2	1.4	2.5	3.0	3.7	3.7	3.9
All other	8.6	11.3	13.8	16.2	18.9	54.5	53.6	53.6	53.5	52.4
Total, public	9.6	13.1	16.8	20.2	24.5	100.0	100.0	100.0	100.0	100.0
Federal	1.7	2.3	2.5	3.0	3.5	17.6	17.3	14.9	14.7	14.1
State	3.7	5.0	6.7	8.0	10.1	38.4	38.2	39.7	39.7	41.1
Local	.4	.6	.9	1.1	1.3	4.1	4.6	5.1	5.4	5.5
All other	3.8	5.2	6.7	8.1	9.6	39.9	39.9	40.3	40.2	39.3
Total, nonpublic	6.3	7.9	9.0	10.3	11.7	100.0	100.0	100.0	100.0	100.0
Federal	1.4	1.7	1.7	1.9	2.0	22.1	22.1	18.8	18.3	17.1
State	.1	.1	.1	.2	.3	1.5	1.3	1.6	2.0	2.5
Local	(2)	(2)	.1	.1	.1	.1	.3	.7	.5	.6
All other	4.8	6.1	7.1	8.1	9.3	76.3	76.3	78.9	79.2	79.8

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[1] Includes estimates for "other" elementary and secondary schools such as residential schools for exceptional children, Federal schools for Indians, and federally operated elementary and secondary schools on military posts. The annual receipts of "other" elementary and secondary schools were estimated as follows: Public, $200 million, annually, 1965-66 to 1973-74; nonpublic, $100 million, annually, 1965-66 to 1973-74.

[2] Less than $50 million.

[3] Less than 0.05 percent.

NOTE.–Receipts include revenue and nonrevenue receipts, current and plant-fund receipts, and proceeds of loans, less transfers which would result in duplication, and less repayment of loans. All receipts and deductions concerning loans are included in "all other" sources. Deduction of transfers was made from data in "all other" sources.

Table B-11.-Federal funds for education

[In thousands

Type of support, level, and program area (1)	1960 (2)	1962 (3)	1964 (4)	1966 (5)	1968 (6)	1969 (7)
					Part I. Federal funds supporting	
Total grants and loans	**$1,714,781**	**$2,109,795**	**$2,777,361**	**$5,762,150**	**$7,781,636**	**$8,054,491**
Grants, total	**1,474,455**	**1,789,263**	**2,312,467**	**5,150,450**	**7,178,355**	**7,551,211**
Elementary and secondary education	490,480	542,320	666,501	2,037,103	2,967,004	2,838,439
School assistance in federally affected areas	258,198	282,909	334,289	409,593	506,372	397,581
Educationally deprived/economic opportunity programs[1]	47,239	53,137	67,179	1,151,403	1,685,516	1,648,540
Supporting services[2]	63,939	55,491	72,264	169,270	389,490	364,423
Teacher corps	....	4,000	5,100	6,325	16,019	19,358
Vocational education	32,800	37,579	39,569	93,268	185,224	152,441
Dependents' schools abroad	32,766	40,520	61,500	79,100	68,220	108,589
Public lands revenue for schools	40,994	43,524	48,600	54,144	52,294	66,112
Assistance in special areas[3]	10,017	20,760	32,600	68,800	58,286	71,118
Veterans' education	....	....	....	....	3,200	4,924
Emergency school assistance	....	....	....	....	....	....
Other[4]	4,527	4,400	5,400	5,200	2,383	5,353
Higher education	829,880	1,170,322	1,456,835	2,271,747	3,240,170	3,346,219
Basic research in U.S. education institutions proper[5]	407,000	602,900	698,600	941,000	1,039,000	1,020,000
Research facilities[5]		121,800	133,500	194,000	199,790	238,516
Training grants, fellowships, and traineeships	159,494	299,900	443,000	630,400	701,419	652,830
Facilities and equipment	1,206	3,404	32,535	109,547	549,382	482,387
Other institutional support	13,580	26,718	69,500	163,800	139,637	173,066
Other student assistance	248,600	103,900	62,300	214,200	608,883	769,445
Other higher education assistance	....	11,700	17,400	18,800	2,059	9,975
Vocational-technical and continuing education (not classifiable by level)	154,095	76,621	189,131	841,600	971,181	1,366,553
Vocational, technical and work training[7]	16,144	23,821	158,231	821,300	851,683	1,163,444
Veterans' education	134,300	49,900	25,100	6,300	79,615	123,970
General continuing education[8]	([9])	([9])	([9])	([9])	28,701	60,364
Training State and local personnel	3,651	2,900	5,800	14,000	11,152	18,775
Loans, total (higher education)	**240,326**	**320,532**	**464,894**	**611,700**	**603,281**	**503,280**
Student loan program, National Defense Education Act[10]	40,326	74,632	177,394	235,900	226,303	230,694
College facilities loans[11]	200,000	245,900	287,500	375,800	376,978	272,586

See footnotes at end of table.

and related activities: 1960 to 1977

of dollars]

1970 (8)	1971 (9)	1972 (10)	1973 (11)	1974 (12)	1975 (13)	1976 (estimated) (14)	Transition quarter (estimated) (15)	1977 (estimated) (16)
education in educational institutions								
$9,220,355	**$10,927,645**	**$11,770,991**	**$12,689,660**	**$13,078,835**	**$17,589,325**	**$20,137,337**	**$ 4,264,077**	**$17,060,774**
8,712,389	**10,593,204**	**11,422,265**	**12,343,928**	**12,726,973**	**17,109,675**	**19,670,065**	**4,213,093**	**16,606,069**
3,212,418	3,724,363	3,856,527	4,084,972	4,207,467	4,998,055	5,079,389	1,180,605	4,680,049
656,372	527,043	648,608	580,493	558,527	618,711	657,536	57,498	438,463
1,742,376	2,239,637	2,087,154	2,278,931	2,264,410	2,764,880	2,728,021	665,169	2,773,268
296,079	259,899	310,378	317,795	273,783	360,803	379,515	105,055	318,219
18,191	28,761	23,887	32,092	33,073	39,002	28,846	7,583	36,138
181,379	241,481	282,545	305,728	289,610	350,867	343,893	49,903	333,133
137,138	146,615	168,908	190,603	218,287	234,981	252,941	57,679	269,004
82,376	78,893	73,285	90,646	110,116	148,557	134,062	130,486	81,050
78,992	120,719	156,757	176,922	159,549	136,465	126,698	19,059	107,775
6,233	13,763	16,674	43,835	67,483	113,600	151,900	17,800	79,500
....	51,239	68,816	43,391	184,507	197,426	237,483	58,824	203,934
13,282	16,313	19,515	24,536	48,122	32,763	38,494	11,549	39,565
3,910,878	4,895,588	5,172,443	5,964,987	6,063,691	7,995,305	9,700,094	1,761,720	8,088,497
984,000	1,054,385	1,192,167	1,175,498	1,299,824	1,243,168	1,273,028	210,000	[6] 1,273,000
225,130	227,908	175,747	204,985	183,274	198,657	180,384	30,000	[6] 180,000
895,960	1,037,202	982,008	968,918	997,977	1,081,923	1,043,788	243,923	813,666
513,162	518,944	400,147	451,658	262,526	336,408	202,465	51,609	250,973
178,156	266,090	292,291	339,625	363,732	427,588	435,286	87,900	395,732
1,101,924	1,781,581	2,130,083	2,824,303	2,956,358	4,707,561	6,565,143	1,138,288	5,175,126
12,546	9,478	....	....	....	....	....	....	....
1,589,093	1,973,253	2,393,295	2,293,969	2,455,815	4,116,315	4,890,582	1,270,768	3,837,523
1,269,254	1,515,741	1,829,481	1,474,847	1,494,927	3,037,000	3,606,000	1,025,000	2,911,000
244,634	357,414	429,229	658,424	800,375	898,900	1,113,300	210,400	783,400
65,855	88,305	125,715	149,738	148,117	151,971	139,849	28,788	123,588
9,350	11,793	8,870	10,960	12,396	28,444	31,433	6,580	19,535
507,966	**334,441**	**348,726**	**345,732**	**351,862**	**479,650**	**467,272**	**50,984**	**454,705**
196,843	231,706	287,163	324,551	362,795	448,874	390,600	42,500	398,075
311,123	102,735	61,563	21,181	–10,933	30,776	76,672	8,484	56,630

See footnotes at end of table.

Table B-11.--Federal funds for education

[In thousands

Type of support, level, and program area (1)	1960 (2)	1962 (3)	1964 (4)	1966 (5)	1968 (6)	1969 (7)
PART II. Other Federal funds for						
Total	**$2,285,793**	**$2,770,319**	**$3,217,179**	**$3,901,944**	**$3,620,279**	**$3,332,168**
Applied research and development[5]	471,000	754 700	906,300	1,054,000	1,157,000	1,230,000
School lunch and milk programs	305,512	366,900	411,700	421,900	543,845	597,700
Training of Federal personnel	1,027,875	1,177,483	1,370,400	1,706,705	1,138,333	639,853
U.S. academies	53,113	59,416	119,796	154,593	141,599	170,468
Professional training, military	[12]956,000	1,086,584	1,202,604	1,470,507	923,470	375,105
Civilian education and training in non-Federal facilities	18,762	31,483	48,000	81,605	73,264	94,280
Library services	21,105	22,232	25,243	72,215	136,099	186,124
Grants to public libraries	6,056	6,932	7,443	40,915	62,017	62,794
National library services[13]	15,049	15,300	17,800	31,300	74,082	123,330
International education	83,525	102,050	112,600	229,429	272,008	278,135
Educational exchange program	22,450	21,050	20,600	50,271	41,670	38,172
Agency for International Development projects	61,075	81,000	92,000	179,158	140,000	170,000
ACTION (previously Peace Corps)					43,641	44,095
Other international education and training					46,697	25,868
Other	376,776	346,954	390,936	417,695	372,994	400,356
Agricultural extension service	53,715	59,252	79,400	89,216	90,030	97,273
Educational television facilities[14]	....	....	....	4,663	6,737	8,756
Education in Federal correctional institutions	1,453	2,138	2,885	3,615	3,662	3,816
Value of surplus property transferred:						
Acquisition cost of personal property	310,000	244,900	268,700	266,400	199,383	223,503
Fair value of real property		21,000	15,100	15,100	26,276	13,254
Other[15]	11,608	19,664	24,851	38,701	46,906	53,754

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[1] Includes Office of Economic Opportunity, Indian education, Appalachian Regional Development Commission, and Department of Labor programs as well as Head Start preschool, Elementary and Secondary Education Act, title I, handicapped children, dropout prevention, bilingual education, Kendall School for the Deaf, and Model School for the Deaf.

[2] Includes supplemental centers, school library materials, strengthening State education agencies, captioned films for the deaf, dissemination of information, school counseling and testing, American Printing House for the Blind, planning and evaluation, and equipment and minor remodeling.

[3] Includes District of Columbia, Canal Zone, territories and dependencies, Cuban refugees, and payments in lieu of taxes by the Atomic Energy Commission and the Tennessee Valley Authority.

[4] Includes elementary-secondary programs of the National Science Foundation, National Foundation on the Arts and the Humanities, Department of Defense (Junior ROTC), and National Aeronautics and Space Administration; also, Office of Child Development and Office of Education programs and expenditures not otherwise included.

[5] Data are from Federal Funds for Research, Development, and Other Scientific Activities, annual publication, National Science Foundation. Includes university-operated research centers.

[6] 1977 amounts are not available. Data are amounts for 1976, rounded to nearest million.

[7] Includes adult vocational education and manpower training programs.

[8] Includes Office of Education, Action, Social and Rehabilitation Service, Department of Housing and Urban Development, Office of Economic Development, and additional programs for continuing education.

[9] Included in "Vocational, technical, and work training."

[10] Includes National Defense Education Act and insured student loans.

[11] Includes net amounts (loans minus loan repayments) for the Department of Housing and Urban Development college housing loans, Office of Education college

and related activities: 1960 to 1977—Continued

of dollars]

1970 (8)	1971 (9)	1972 (10)	1973 (11)	1974 (12)	1975 (13)	1976 (estimated) (14)	Transition quarter (estimated) (15)	1977 (estimated) (16)
education and related activities								
$3,431,975	**$ 4,011,245**	**$ 4,526,521**	**$ 4,712,247**	**$ 4,858,539**	**$ 5,783,952**	**$ 6,488,773**	**$1,341,268**	**$ 6,267,975**
1,240,000	1,318,963	1,470,556	1,465,356	1,708,589	1,970,056	2,000,401	322,000	•2,001,000
676,196	928,186	1,213,075	1,298,002	1,266,673	1,831,784	2,333,118	498,888	2,000,000
691,694	854,930	961,215	1,061,926	980,032	1,014,986	1,108,388	306,750	1,194,318
184,262	218,869	232,047	275,671	248,567	248,567	298,589	76,004	314,030
492,040	614,099	718,180	779,934	719,889	726,809	775,773	219,912	842,911
15,392	21,962	10,988	6,321	11,576	18,505	34,026	10,834	37,377
170,135	186,338	165,096	166,712	207,075	227,645	247,508	66,582	243,491
50,235	52,975	56,246	45,782	43,202	61,531	54,120	9,550	26,600
119,900	133,363	108,850	120,930	163,873	166,114	193,388	57,032	216,891
193,464	180,668	122,740	77,929	94,563	93,474	104,207	27,276	106,496
30,850	36,101	37,837	28,131	30,510	32,349	34,196	6,364	35,620
111,325	105,608	55,612	22,555	47,231	45,224	61,258	18,916	63,972
28,150	25,026	19,819	22,013	15,084	7,207	6,764	1,570	4,976
23,139	13,933	9,472	5,230	1,738	8,694	1,989	426	1,928
460,486	542,160	593,839	642,322	601,607	646,007	695,151	119,772	722,670
124,526	154,672	169,811	185,803	193,436	219,012	227,605	57,200	219,678
19,163	28,580	8,000	28,568	22,000	64,708	79,260	21,093	77,170
5,007	6,333	9,066	9,494	10,172	10,520	12,723	4,661	12,191
246,330	255,668	299,805	276,699	255,937	216,135	231,809	. . .	254,990
12,468	25,718	12,200	25,288	18,226	37,031	21,660	. . . .	23,826
52,992	71,189	94,957	116,470	101,836	98,601	122,094	36,818	134,815

facilities loans, and Federal loans to the District of Columbia for school construction.

[12] Actual figure not available. Amount estimated is 88% of 1962 amount.

[13] Includes Library of Congress, Smithsonian Institution, General Services Administration, National Archives and Records Service, National Agricultural Library, National Library of Medicine, Government Printing Office depository library and catalog and Index activities, and the National Commission on Library and Information Science.

[14] Also includes education broadcasting facilities.

[15] Includes Education Division, Office of Education and other education programs and administration expenditures not otherwise included.

NOTE.—Public Law 93-344 established a new fiscal year period (October 1 through September 30) effective with fiscal year 1977. The transition quarter is the 3-month period between the fiscal year 1976 which ended June 30, 1976 and the fiscal year 1977 which began October 1, 1976.

SOURCE: Compiled by the National Center for Education Statistics, U.S. Department of Health, Education, and Welfare, from information collected by the Office of Management and Budget for its report, *Special Analyses, Budget of the United States, Fiscal year 1976*. Research data are from *Federal Funds for Research, Development, and Other Scientific Activities*, Vol. XXIII, National Science Foundation.

Table B-12.--Office of Education expenditures, by program: Fiscal years 1960 to 1977

[In thousands of dollars]

Program	1960	1962	1964	1966	1968	1970	1972	1974	1975	1976[1]	Transition quarter[1,3]	1977[1]
Total	**$459,965**	**$547,408**	**$673,005**	**$2,024,528**	**$3,613,476**	**$4,111,598**	**$4,903,711**	**$4,884,916**	**$6,419,420**	**$6,952,357**	**$1,325,109**	**$6,637,121**
Elementary and secondary education[3]	63,529	54,821	71,489	915,174	1,436,732	1,467,792	1,869,081	1,766,412	2,376,221	2,273,580	535,584	2,260,280
Educational deprived children[4]	....	....	....	746,904	1,049,116	1,170,355	1,570,388	1,460,058	1,959,897	1,818,252	400,195	1,872,083
Consolidated programs[5]	63,529	54,821	71,489	168,270	387,616	291,245	272,683	268,000	353,495	370,025	103,019	306,644
Bilingual education	....	....	....	....	....	6,192	26,010	38,354	62,829	85,303	32,370	81,553
School assistance in federally affected areas	258,198	282,909	334,289	409,593	506,372	656,372	648,608	558,526	618,711	657,536	57,498	438,463
Maintenance and operation	174,850	226,419	283,688	353,851	470,887	620,463	628,305	536,089	597,859	631,867	50,097	419,497
Construction	83,348	56,490	50,601	55,742	35,485	35,909	20,303	22,437	20,852	25,669	7,401	18,966
Higher education[6]	40,326	74,532	111,729	212,264	532,690	707,419	1,035,983	1,150,051	1,869,711	2,487,181	398,417	2,439,045
University community services	....	....	....	3,926	9,897	10,669	9,518	22,833	12,322	10,556	....	1,213
Library programs												
College library resources	....	....	....	....	48,906	34,063	3,913	10,107	12,389	10,390	2,440	8,315
Library training	....	....	....	....	11,381	7,005	2,469	2,824	3,613	1,635	225	1,022
Strengthening developing institutions	....	....	....	....	22,428	27,731	35,766	48,858	89,122	72,970	22,000	89,511
Student assistance												
Educational opportunity grants[7]	....	....	....	....	103,104	142,577	167,600	239,212	608,977	1,088,670	144,323	989,165
Work-study and cooperative education	....	....	....	30,634	111,812	172,075	251,997	82,090	243,941	372,046	57,928	386,322
Direct loans to students[8]	40,326	74,532	111,729	177,394	182,825	194,520	287,163	281,339	345,261	292,542	14,000	318,920
Insured loans	....	....	....	....	28,947	98,330	201,321	294,346	333,849	412,956	108,777	465,331
Student loans insurance fund	....	....	....	....	....	2,323	26,589	83,823	111,087	107,163	28,500	91,075
Special programs for disadvantaged[9]	....	....	....	10	2,497	7,437	43,963	77,551	88,780	105,482	18,900	79,189
TV and other instructional equipment	....	....	....	....	5,415	4,968	5,684	3,783	19,179	9,369	1,324	6,002
Miscellaneous other[10]	....	....	....	300	5,478	5,721	....	3,285	1,191	3,402	....	2,980
Higher education facilities	....	....	....	105,526	461,965	437,387	212,628	77,900	98,031	70,289	7,592	58,320
Grants[11]	....	....	....	54,634	360,246	323,188	188,121	52,805	67,324	36,693	6,000	20,687
Construction loans	....	....	....	50,892	101,719	114,199	24,468	13,014	16,292	10,596	–4,408	12,633
Construction loan interest subsidization	....	....	....	....	....	....	39	12,081	14,415	23,000	6,000	25,000
Vocational education[12]	45,179	51,762	54,503	128,468	255,224	283,975	416,945	462,236	529,656	519,390	75,507	540,014
Basic vocational education programs[13]	45,179	51,762	54,503	118,396	250,197	271,282	370,619	399,209	459,866	447,778	63,200	491,009
Consumer and homemaking education	....	....	....	....	....	5,059	19,091	30,318	34,756	37,580	6,953	26,000
Work-study and cooperative education	....	....	....	10,072	5,027	5,322	24,256	28,716	30,490	29,716	5,084	17,880
State and National advisory councils	....	....	....	....	....	2,312	2,979	3,993	4,544	4,316	270	5,125

Education personnel training[14]	23,912	45,531	51,203	97,543	178,652	233,912	204,650	197,394	163,838	118,354	28,251	112,369
Higher education[15]	14,921	30,695	34,768	44,586	80,084	90,078	72,365	55,465	18,359	22,550	5,104	15,670
Teacher Corps	. . . .	. . . .	. . . .	362	16,019	18,191	23,887	33,073	39,002	28,846	7,583	36,138
Special education (handicapped)	308	943	2,466	10,448	24,162	31,219	25,205	32,614	39,612	38,869	11,051	42,741
Other	8,683	13,893	13,969	42,147	58,387	94,424	83,193	76,242	66,865	28,089	4,513	17,820
Public library service and construction	6,056	6,932	7,443	40,915	62,017	52,687	54,086	44,441	62,362	55,320	9,771	27,640
Public library services	6,056	6,932	7,443	25,000	34,306	33,489	44,284	36,230	49,660	44,950	7,570	22,700
Public library construction . .	. . . .	. . . .	. . . .	15,915	26,615	17,527	7,184	4,127	7,940	6,400	1,280	2,560
Interlibrary cooperation[16] . .	. . . .	. . . .	. . . .	. . . .	1,096	1,671	2,618	4,084	4,762	3,970	921	2,380
Education for the handicapped[17]	72	248	2,516	4,918	16,793	47,846	67,933	89,947	115,242	161,335	44,962	186,791
State grant program	. . . .	. . . .	. . . .	. . . .	7,867	31,073	32,657	43,016	58,128	95,565	26,737	105,273
Early childhood education . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	6,687	11,065	14,708	15,[illegible]34	4,278	17,884
Special centers, projects, and research	. . . .	. . . .	1,016	3,227	8,277	12,515	16,883	22,648	31,777	35,872	11,079	46,008
Captioned films and media services	72	248	1,500	1,691	649	4,258	11,706	13,218	10,629	14,164	2,868	17,626
Research, special studies and projects[18]	6,004	7,461	12,712	31,245	79,955	93,120	132,040	119,375	98,867	83,856	19,698	84,586
Land-grant colleges	5,052	10,744	14,500	14,500	14,500	21,961	12,600	12,200	12,200	12,200	. . . .	. . . .
Special foreign currency	. . . .	6	138	500	857	774	2,279	1,908	1,881	1,989	426	1,928
Adult basic education[19]	. . . .	. . . .	. . . .	33,616	28,701	43,464	55,971	63,270	68,999	62,360	16,410	67,830
Emergency school aid[20]	. . . .	. . . .	. . . .	5,291	7,437	10,608	92,214	196,045	187,833	225,988	56,913	193,219
Education TV and broadcasting facilities 21	. . . .	. . . .	. . . .	. . . .	. . . .	4,163	12,182	5,859	21,793	24,332	6,972	19,675
Follow Through	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	2,024	46,595	53,179	44,887	21,580	47,955
Indian education	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	15,694	40,036	42,101	12,132	44,572
Office of Education salaries and expenditures[22]	11,608	12,664	14,251	25,901	40,906	47,714	84,694	77,411	100,650	111,659	33,396	114,434
Consolidated Working fund - net advances and reimbursement	+29	–202	–1,768	–1,026	–9,325	+2,404	–207	–348	+210	. . . .	. . . . .	. . . . .
Expenditures from funds transferred to the Office of Education by other Federal agencies[23]												
Manpower Development and Training Act[24]	. . . .	. . . .	64,777	75,532	99,451	121,451	126,500	127,925	71,857	. . . .	. . . .	. . . .
Educational television facilities .	. . . .	. . . .	1,962	4,663	6,737	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Mutual exchange activities (foreign currency)[25]	. . . .	. . . .	. . . .	1,592	1,434	930	873	646	827	. . . .	. . . .	. . . .
Appalachian Regional Development and Training Act[26] . .	. . . .	. . . .	. . . .	. . . .	21,753	27,128	36,640	42,972	43,377	. . . .	. . . .	. . . .

Table B-12.--Office of Education expenditures by program: Fiscal years 1960 to 1977—Continued

[In thousands of dollars]

Program	1960	1962	1964	1966	1968	1970	1972	1974	1975	1976[1]	Transition quarter [1,2]	1977[1]
Cuban Refugee Program	. . . .	$ 5,195	$ 9,603	$ 9,302	$ 6,990	$ 19,488	$ 18,110	$ 11,630	$ 3,885	. . . .	. . . .	. . . .
Office of Economic Opportunity[27]	. . . .	. . . .	. . . .	54,681	686	38,234	78,096	2,272	589	. . . .	. . . .	. . . .
Consolidated Working Fund - gross outlay	62	3,068	2,250	10,515	11,395	6,165	3,377	2,381	2,718	. . . .	. . . .	. . . .

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[1] Estimated.

[2] Public Law 93-344 established a new fiscal year period (October 1 through September 30) effective with fiscal year 1977. The transition quarter is the 3-month period between the fiscal year 1976 which ended June 30, 1976, and the fiscal year 1977 which began October 1, 1976.

[3] Includes amounts distributed under provision of the Elementary and Secondary Education Act of 1965 (ESEA) and the National Defense Education Act (NDEA). Funds authorized under title VI of ESEA for education of the handicapped are not included here but under "Education for the handicapped."

[4] Title I of ESEA includes funds for students more than 1 year below grade level, Indian children, migratory children, handicapped children, and neglected and dilinquent children.

[5] Includes amounts authorized under titles II, III, and V of ESEA and NDEA titles III, X, and a portion of V for guidance, counseling, and testing.

[6] Includes amounts distributed under provisions of the Higher Education Act, as amended, and direct loans to students provided under title II of NDEA. Amounts for teacher Corps and for institutes and fellowships for college personnel are included under "Education personnel training."

[7] Includes Basic and Supplemental Opportunity Grants, grants for State student incentives, public service fellowships, mining fellowships, and training for disadvantaged.

[8] Includes loans and loan cancellations.

[9] Includes Talent Search, Special Services for Disadvantaged Students, Upward Bound, and Veterans' Cost-of-Instruction payments.

[10] Includes amounts for acquisition and cataloging by the Library of Congress, State higher education administration, State postsecondary education commisions, continuing education project, and miscellaneous other activities.

[11] Includes amounts for undergraduate and graduate facilities, facilities in major disaster areas, and State administration and planning for facilities.

[12] Amounts for research, innovation, and curriculum development are included in "Research, special studies and projects." Amounts for vocational teacher training are included in "Education personnel training."

[13] Also includes program amounts for students with special needs.

[14] Does not include training under the Civil Rights program.

[15] Includes language training and area studies, college personnel training and fellowships, and education research training.

[16] Beginning in 1974, also includes library demonstration.

[17] Amounts for teacher training included in "Education personnel training."

[18] Includes research and innovative programs and curriculum development for vocational education, and special studies and projects except those provided as part of "Salaries and Expenditures" for the Office of Education. Also includes Office of Education funds transferred to the National Institute for Education.

[19] Includes amounts for adult vocational education.

[20] Also includes Civil Rights services and training.

[21] Supported with transferred funds prior to 1969.

[22] Also includes amounts for technical service, planning and evaluation, and special studies and projects not elsewhere covered.

[23] Amounts listed below are not included in the Office of Education expenditure totals.

[24] Includes amounts for Area Development Act.

[25] Includes Educational Exchange Program.

[26] Funds transferred prior to 1967 are included in the Consolidated Working Funds. Since 1972, also includes Development Facilities (Economic Development Assistance, Department of Commerce), Regional Development Programs (Regional Action, Planning Commission), and military construction (Army).

[27] Some OEO transfers also included in the Consolidated Working Funds.

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